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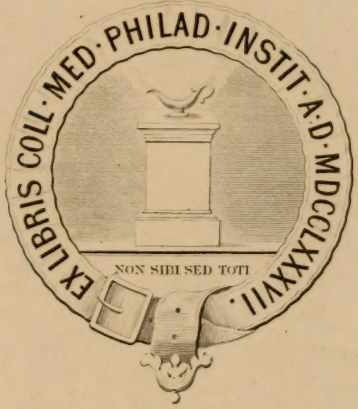

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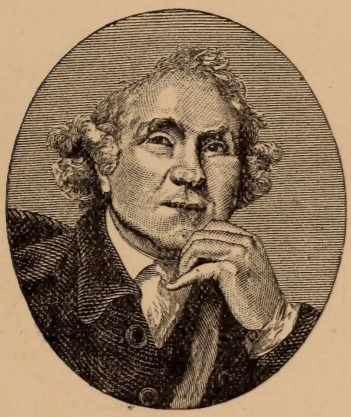

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ORIGINAL ARTICLES.

MOTION TO PREVENT ANCHYLOSIS, AND AN ELEMENT IN THE TREATMENT OF JOINT TROUBLES.

BY A. J. STEELE, M. D., ST. LOUIS.

[*Read before the St. Louis Medico-Chirurgical Society, November 8th, 1880.*]

SOME two months since, in the discussion which followed the presentation to the Society of an interesting case of acute joint trouble, by Dr. C. E. Briggs, I had occasion to remark that his patient would be none the worse because he, the doctor, did not succeed in obtaining, as he had wished, an opportunity to make *brisement forcé* in the rigid knee and hip joints. I argued that if the inflammation still existed, passive motion should not be instituted, for it would only aggravate the already existing pathological process, and that so soon as the inflammation subsided, the patient would actively move the joints, and thus their normal motion would soon be restored. Time has proved the correctness of my opinion, or, at least has not disproved it, for the patient is now up and about with good use of his limb.

The interest of the subject, Motion in Joint Troubles, brought forward on the occasion above referred to, has prompted me to consider it more fully, though briefly on this.

It is an important question to decide when to institute passive motion or to allow active movement in diseased articulations that anchylosis may be prevented.

If commenced too soon the disease may be aggravated and prolonged; if delayed too late the deformity may become permanent. Doubtless, good men have erred in both directions. Hilton was satisfied if his joint cases recovered with anchylosis; he strove to secure such result. On the other hand, I think American specialists have erred greatly in their efforts to retain motion.

For the present we will confine our illustration of this observation to hip-joint disease. As early as 1856, Dr. Davis produced a splint for the treatment of morbus coxarius, which "admitted of free motion of the affected joint," he giving as a reason for this innovation of treatment that "no portion of the anatomy requires motion to maintain integrity more than the joints."[1] Dr. Sayre soon followed in 1860, giving to the profession his short hip-splint, which contained a ball and socket joint, with the intent of permitting movement, "for motion," he says, is as essential in retaining a healthy condition of the structures about a joint, as light is essential in retaining a healthy condition of the eye."[2] Taylor, imbued with the same idea, produced a splint modified after Davis, but embodying the same principle; he insists that "motion in the joint is highly beneficial."[3] Andrews, Washburn, Hutchinson, Pancoast, Gross, Agnew, have all embodied the same idea in splints, designated after their respective names, and constructed on similar principles; and in their lead four-fifths of all the practitioners of to-day in this country are employing the

1 Conservative Surgery, pp. 214–308.

2 Orthopedic Surgery, p. 260.

3 Mechanical Treatment of Disease of the Hip-Joint, pp. 15, 23.

same. Order a hip-joint splint from the East, or from Schleifarth, Leslie, Hernstein or any other instrument-maker in our city, and in nine cases out of ten you will be furnished with an appliance allowing motion at the joint or with that intent. This idea of motion during the treatment seems to be the generally accepted one, and I claim that it is erroneous. So long as the joint surfaces and structures are inflamed, quiet of the parts should be the therapeutic principle of treatment. It is true that Davis and Taylor and Sayre modify their advice as to motion by insisting at the same time on extension. The first gentleman says, "motion without friction," and claims that his splint "admitting of free motion at the diseased joint, rigidly excludes all friction of the diseased surfaces."[1] The second asserts that "motion in the joint without pressure is not only not injurious but is highly beneficial."[2] The latter advises "freedom from pressure of the parts involved in the disease, without materially interfering with the mobility."[3]

With due deference to the opinions of the gentlemen quoted, I must express my belief at variance with them, to the effect, that while joint inflammation exists, motion will be injurious. It is true, these surgeons insist upon extension of the limb as a precursor or accompaniment of the motion, claiming that with the tension of the muscles relieved, the joint surfaces may be rubbed together with impunity. Of this I would say that sufficient continuous extension cannot be made to separate the joint surfaces, though the excessive pressure caused by the contraction of the irritated muscles can be greatly modified. But, while the surfaces must necessarily be in contact, if additionally they are inflamed, motion, *i. e.*, friction, will only aggravate. Again, it is not merely the articular surfaces that are involved in the disease; the surrounding ligaments

1 Op. cit. p. 214.
2 Op. cit. p. 15.
3 Op. cit. p. 259.

and periarticular structures are implicated and they need rest, not mobility, to arrest their diseased action.

Verneuil[1] has given us some axiomatic principles derived from his long experience, that are at variance with our "American idea." He says, "rest for a diseased organ, activity for a healthy organ." It is just here that Davis makes his mistake; while his assertion is true that "no portion of the anatomy requires motion to maintain integrity more than the joints," yet this applies to healthy joints and not as he makes the application in his splint, to diseased ones. And the same of Sayre as he announces the reason for a joint in his splint; that "motion is as essential in retaining a healthy condition of the structures about a joint, as light is essential in retaining a healthy condition of the eye." That is true of the normal or physiological condition, but not, as he makes it apply, to the diseased; for as Verneuil says again, "the activity necessary to a healthy organ may prevent its healing when diseased."

When all signs of inflammation of the joint have subsided, then with propriety may come in the passive or active motion, to the end of preventing anchylosis. To ascertain this opportune moment is not always easy; if tenderness exists behind the trochanter, or pain is produced by flexion, the time is not yet.

The axiom of treatment is, first subdue the inflammation, then restore motion. If motion is resorted to too early the inflammation is only prolonged.

Bony anchylosis is rarely a sequence of chronic joint disease, at least of the so-called strumous. The consequent immobility is due rather to contraction of the muscles and to thickening and induration of the ligaments, extra-capsular, and also to the junction of the articular surfaces by a comparatively soft or membranous tissue, intra-capsular. Now, exercise of the joint at the proper time and assiduously carried out will prevent these tissues from becoming so firm as to preclude all future motion. In comparatively

1 *Medical Times and Gazette*, Oct. 18, 1879, p. 454.

mild cases, when destruction of the joint structures has not occurred, there may be a temporary anchylosis arising "from a diminution of the elasticity of the articular cartilages, and an enfeebling of the ligaments and muscles from disuse." In such cases, careful and persistent motion will restore the parts to their normal usefulness.

I believe that, in my own experience, adopting the so-called "American idea," of early motion with extension to avoid anchylosis, I have produced just the condition I sought to evade; my mistake has been too early discontinuance of fixation, and too premature re-commencement of movement.

It might be asked, if Davis, Taylor and Sayre were so at fault in their ideas of treatment, how it is they ever had good results. One good thing they did was to supply a portative apparatus whereby the patients had the benefit of out-door light, air and exercise; and another thing, while believed theoretically in motion yet practically they were very often not getting it.

Their splints (I do not include Sayre's short splint) when well applied, fixed the joint rather than gave motion. Dr. Shaffer demonstrated this by applying a Taylor-Sayre instrument to the *right* lower extremity of a child whose *left* hip was anchylosed from former disease. After the application of the splint to the healthy limb the patient could not walk one step. All motion of the *left* hip being lost, the boy, with extension was unable to bring the flexible vertebral column to his aid."[1]

Our friends have been imbued with the idea that fixation of a joint must necessarily induce such structural change as to lead to permanent anchylosis. This is an error; disuse leads to stiffness, which will disappear by means of frictions, movements and use of the part.

The anchylosis following arthritis, is due to the anatomical lesions of the disease present, rather than to the prolonged fixation. Verneuil asserts that fixation of a normal

1 *Archives of Medicine*, vol. iv., p. 199.

joint never anchylosed it; so long as there is no inflammation there can be no anchylosis. It is quite possible we could prevent some of the tissue changes causing the stiffness of a joint, by the use of electricity to the periarticular muscles during the period of fixation.

This subject takes new interest and has a practical bearing in its application to fractures near and involving joints. In treating such fractures our efforts are in the direction of securing union of the separated fragments, but the experienced surgeon will also realize that the question of function must be considered, for there is danger of a stiff joint. To prevent this, our surgical preceptors have insisted on early and persistent passive motion. Now, shall this rule be set aside as an unfounded bug-bear? Is it possible that in our efforts to prevent a stiff joint we have unwittingly been expending useless energy and haply adding to already existing mischief? If the fragments are in apposition and uniting, early motion might displace them, and retard and prevent union. When the fracture has been very simple, without serious involvement of the joint, the inflammation will not run high and the repair will be prompt if quiet is enjoined. If, at the end of three or four weeks, any stiffness remains, gentle, painless, persistent, passive motion will relieve it. But when the fracture has been complicated and the injury serious, a high grade of inflammation will ensue and be prolonged. Now, if while this condition exists, motion be instituted, grievous mischief will be done.

Better keep the parts quiet and direct efforts to subduing the inflammation, even though this should require three or four weeks. I have known the best efforts of the best surgeons, employing passive motion early, followed by anchylosis. The rule should be, secure union, subdue inflammation, and at the end of four weeks institute passive motion. Some of these cases will be followed by muscular rigidity, which it may require months to overcome.

I fully understand that the plan of treatment may vary according to the locality affected or the joint involved; thus

in Colles' fracture, stiffness of the wrist and finger joints often results from too long confinement on splints, whereas, if treated by Prof. E. M. Moore's method, a strip of adhesive plaster firmly around the lower arm opposite the seat of fracture, which leaves the finger joints free and the wrist largely so, and which the patient will very early use, the usual stiffness rarely occures. The stiffness following Colles' fracture, is not usually due to inflammation of the wrist or finger joints, but to "inflammatory effusion and consequent adhesions along the thecæ and serous sheaths through which the tendons pass in their course to the hands and fingers," and thus the ordinary rule of fixedness of the joint does not apply as it is not the joint that is at fault, and the limited motion, such as I have referred to, does not displace the fragments. In fractures near and involving the elbow, I would keep the splint continuously applied until union occurred and the inflammation subsided. I have, however, had very satisfactory results in the employment of angular binder's board splints; putting up the fracture at a right angle, and in ten days substituting splints of a more acute angle, every fifth or seventh day changing the splints, so during the treatment passing through an arc from a very acute to a quite obtuse angle. The olecranon I would treat in a straight position; so too the patella. I would like to speak of fractures in other localities, but it is unnecessary, if I simply state the principle I endorse, namely, secure union and subdue the inflammation, then possibly at the end of four weeks, institute motion. In other words, both in joint diseases and in fractures near joints, let us not be over anxious, in our efforts to prevent anchylosis, to move the joint too soon.

SUPPLEMENTARY.

Since the above was in type, I have read the report of a discussion before the Anatomical and Surgical Society of Brooklyn (see *Annals*, Aug. and Sept. Nos.) on Fractures Involving the Elbow Joint. One of the dreaded sequelæ of this accident is impairment of function; to prevent this,

surgeons have early and persistently instituted passive motion. Dr. Oscar H. Allis, Surgeon to the Presbyterian Hospital of Philadelphia, in a paper before the above Society, had occasion to remark on this point: In the first or milder grade of fractures, when the period of usefulness arrives, viz., the period of functional activity, no passive motion will be required, since Nature stands ready to resume the function which she herself suspended. In the *second* or middle grade of injuries, if the limb has been kept quiet[1] during the first and second stages, there need be no distrust about return of function. In this class, as in the first, I do not resort to passive motion during the second stage. I give the bone time to heal and the soft parts to get well, before I begin motion; and when employing motion, if I find that beyond a certain degree of flexion and extension pain is produced, I assure my patient that he is to employ his limb gently and mildly, and that the full function will return as soon as soreness has disappeared. In the *third* grade of injuries, shall passive motion be instituted during the second stage? My own practice is to *maintain absolute rest.* I do not hope for early functional return in this class. I am willing to prescribe four to six months to such cases. Early passive motion cannot hasten, but may greatly retard the cure. In the fifth or sixth week gentle motion may be applied. About the seventh or eighth week, under ether, two or three slow motions may be made, and repeated after a week—the arm being kept quiet in the interim.

Dr. John A. Ray, giving the result of his observations in seventy-eight cases, says: In all of my own cases, in which I used the permanent splint (of plaster of Paris, and in the extended position), I have left them up from *four* to *six* weeks. There is always a little stiffness of the joint after the splint is removed, which soon wears away. In those

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1 By this I do not mean that the arm should not be removed from its dressings, daily if necessary. By *quiet*, I mean *no passive motions.*

cases in which the arm was treated in the extended position, the motion of the joint was more perfect and free than those placed at a right angle.

Dr. Lewis S. Pilcher remarks before the same Society: As the result of a very exaggerated fear of anchylosis, practitioners have been caused to commit two grave faults, too early suspension of passive immobilization, and the premature reëstablishment of articular movements. The chief source of further injury is the movement of the fragments upon each other. The results of such movements are the intensification of the temporary hyperemia incident to the original injury, and its conversion into an inflammatory congestion, the effusion of inflammatory exudates into the joint cavity and among the periarticular muscles, and the formation of an excessive callus. The organization of the inflammatory exudates, and of the excessive callus, may both become sources of permanent anchylosis of the joint. Immobilization of the fragments, therefore, is the indication of first importance to be met. In all cases, a certain degree of immediate stiffness and restriction of motion must be expected upon the removal of the appatus, due chiefly to slight adhesions among the periarticular muscles. This, as a rule, will quickly disappear under necessary and physiological use, without the intervention of forced movement. By securing absolute passive immobility of the periarticular muscles until permanent fixation of the fragments has been accomplished, may be prevented in the highest degree inflammatory complications and the resulting dangers of anchylosis. I find myself, therefore, logically led to agree with the position taken by M. Verneuil and by Drs. Allis and Ray, in their recommendations to treat fractures of the elbow by the prolonged application of an immovable apparatus, and in their *objections to the use of early passive movement.*

UTERINE FUNCTION AS A CAUSE OF DISEASE.

BY P. V. SCHENCK, M. D., *Surgeon to St. Louis Female Hospital.*

THE study of the uterus opens a field that no other branch of our profession, replete as it is, can equal. The oculist describes the eye with its coats and chambers, the lens with the laws of refraction and dispersion. He shows that color is to light what pitch is to sound, and with all the enthusiasm of the student, tells us the organ he treats upon is nature's camera obscura—the photographic apparatus of the brain—the window of the soul.

The aurist exhibits the external ear with its pinna; the middle ear with its drum and ossicles; the internal ear with its vestibule and labyrinth. He shows the movements of the autoliths and gives the physics of sound, stating that wave action is necessary for its production, that when two waves meet, like the waves of the sea, we have silence as a result, a mystery as great as the origin of sound. The alienist endeavors to make plain the physiological anatomy of the brain, that great store-house of knowledge. He defines, as near as he can, what process is gone through with when man conceives an idea, and shows the brain action when one endeavors, as when a photographer goes after his negative, to recollect the picture of any thing which has transpired; but there is no comparison between such studies and that which treats of man's origin; between an organ in which an idea is conceived and one in which a being is conceived, similar in all respects, eye, ear and brain, to the body which is the domicile of such an organ. In the performance of this function every part is called into play, from the ovary to the pudendum, from the cushion on the mons veneris to the germinal spot, each and

every portion has its province to fulfill. The uterus is the Creator's mortar from which, ignited by the spark of life, is shot the future being; it is a retort whose talisman is life; it holds the intra-uterine lake from which the human bark sets sail for the sea of life. It forms the banks of a continuous stream on which flows the current of human existence. It is the central plate on which are riveted two generations; it is nature's balloon, which takes the germ from the mountain of the eternity of the past and delivers a living body into the valley of life, which body, as it emerges assumes that spirit which the great German author tells us sleeps in the stone, dreams in the animal, and awakes in man. The ancients supposed the uterus to possess a separate and peculiar life. Areteus compared it to an animal confined within another animal; asserting that it was like a wandering being, that it would take possession of any sense, or occupy any viscera.

In addition to the importance of the organ, the person in whom the organ exists, adds force to the subject. If, since the fall there is anything left of love, it is that which mankind bears to woman as a companion, as a sharer of the heart, as the being to whom he returns, like a worshiper to a secret shrine. In her society are combined our highest happiness and our purest virtue. She is the noblest, most intricate, the last, and the greatest work of God.

The uterus, not fitted for menstruation and gestation, until a period later in life than the heart and lungs for their functions, is rarely subject to disease before puberty, and most of its diseases fall within the limits of menstrual life. It is then that sexual predisposition to disease manifests itself. Perversion of function is the germ of uterine disease. Women as a class, suffer more than men. Special care is necessary to watch their over-sensitive, nervous system, because through it their organic life is impressed.

If the germ of uterine disease is perversion of function, it is important to note the province of the womb: First, menstruation, with its periodical congestion and fatty

degeneration, whether this is, as Tyler Smith contended, a part of the process of preparation for the fecundated ovum; whether the mucous membrane becomes excrementitious and in a state of disintegration is cast off, and a new one is formed, similar to the reproduction of lost parts; whether as Pouchet contended, the greater portion of the mucous membrane is shed off and the vessels are thus ruptured, in other words a labor occurs; Aveling says nidation is like gestation, denidation is like parturition; whether we agree with Williams that the mucous membrane as a whole is cast off; whether Kölliker, Robin and Coste were right when they said the mucous membrane thickens and the blood comes from ruptured capillaries; whether Kundrat and Engelmann were right when they stated that their researches showed that there is a fatty degeneration of the different elements of the mucous membrane including the blood vessels, and it is on account of this weakened condition of the vascular walls that the hemorrhage takes place; or, whether we agree with Leopold that the hemorrhage is not due to the fatty degeneration of the uppermost layer of the mucous membrane, but that it is an extravasation from the enlarged and superficial capillaries. But this we know, and it was taught as long ago as Haller, that the discharge comes from the womb, that the uterus augments in bulk, that the mucous membrane has the appearance as if smeared with blood, is softer and thicker, that it is rugous; that the glands are enlarged and that spherical and fusiform cells are formed. The liquid discharged is blood, and menstruation even when running a perfectly normal course has a disturbing influence, hence the women say themselves they are unwell. Pliny and the Arabian writers taught that the fluid contained poisonous elements. Superstitious minds have believed that if a menstruating woman walked three times around a garden all the flowers would be blighted and the caterpillars killed. The Indians have faith in its virtue as a remedy, that if the saliva of a menstruating virgin be smeared on a

bronchocele of a male it will cure it. But there is no doubt that there are many diseases, especially those of a nervous character, produced as a sequence of disturbance of this discharge. Mere physiological modification of the state of the reproductive functions produces local and general effects, particularly on the nervous system; and pathological changes of the uterus act in a similar manner to the physiological. During menstruation the temperature is reduced, the pulse is lowered and more urea is excreted. There is much of truth in Mundé's view, that menstruation finds its cause neither in the ovaries, the uterus nor the blood, but in the ganglionic nervous system, and it declares itself through the circulation because the circulation is under the control of that system.

In its study, therefore, just as from a single bone an animal may be reconstructed, we grasp the point which holds the whole etiological fabric, the period of puberty, the occurrence of the menses are fruitful causes of neuralgic affections. Menstruation, though a normal attribute often seems an auxiliary cause in the production of anemia, and neuralgia is a sequence. Long continued metrorrhagia brings about exhausted conditions, and may give rise to hysteria; and the increased vascular fullness and irregularity of circulation caused by suppression of menses will influence the nervous system in a similar manner.

The female sex in the proportion five to one are more inclined to hemicrania than men. The sympathy to this and all forms of neuralgia, points the relations of these neuroses to normal or diseased menstruation. Engelmann has with study and conciseness pointed out such neuralgias which he names hystero-neuroses. The need of the day is to study more fully the etiology and pathology of the most common symptoms which cause suffering and prevent the healthy performance of the sexual function of ovulation and menstruation.

Passing the reciprocal influences of menstruation and diseased action of the general economy, we are interested

in the immediate effects upen the uterus itself, with its amenorrhea, dysmenorrhea, its menorrhagia and metrorrhagia, knowing full well that all the functional activities of the womb influence all its diseases. There is a fertile field of study opened to the profession in the consideration of menstrual congestion, of arterial pressure during menstruation, of the peculiar arrangement of nerves and blood vessels, how the uterine artery with the return vein passes through and underneath the constrictor muscle of the cervix, how this muscle also compresses the lymphatics and the nerves, and how when operated on by various influences it often contracts rigidly. Dr. Head has attributed the causing of spasmodic stricture to the nervous structure. He says he never saw in the dead-room a cervical canal strictured by hard nodular tissue. In the study of the circulation and nerve arrangements of the womb are we not nearing, says a late writer, the secret spring, the fountain-head, the true pathology of many uterine diseases? Is not the pathological condition of all womb affections a fullness of the vessels, an exaltation of the nervous power which dominates all blood disturbances and all secretions? The uterus must yield to such influences; this point of congestion has been aptly termed a nerve turmoil; the inter-dependence, the mutual relationship, the extensive nerve dominion, which instigates all muscular movements, produce affections of muscle, nerve, the body and the brain. It is becoming a question whether these functional blessings may not be productive of evil; whether these necessities may not administer to woman's ills; whether they may not become the source and origin of various uterine ailments.

Second, gestation. Among the first commands of God to mankind, was "be fruitful and multiply." So important and essential was this command, that after a lapse of nearly seventeen hundred years, He reiterated it to Noah and his family, using the same words. By the concourse of two beings new organisms come into life

which perpetuate existence and preserve species, thus following in the line of generation; thus following in the line of reproduction we have gestation. The womb during this period is in a state of vital erection. The continuity of the muscles and ligaments implies that by contractile powers they are erectors of the organ; the veins constitute a corpus spongiosum; the arteries form an arterial net work, so that tapping the body at any one point may draw blood from the whole organ. The utero-vaginal tract is a continuity between a mucous and serous cavity, and every kind of nerve is included in this continuous tract, this intermembranous connection; this, nature's safe guard, and in this fact there is a vast field of pathology arising. During gestation the serous coat of the womb is extended, the muscles, especially the middle coat increase in bulk, new structure is formed. The mucous membrane—for there is a mucous membrane in the womb, even though there is no sub-mucous areolar tissue, for where there is an identity of action there must be an identity of nature, and there is no mucous membrane except in the stomach more rich in glandular follicles—the mucous membrane increases in thickness; the ciliated cylinders, says Virchow, are replaced by squamous epithelium. The decidua vera is nothing else than the uterine mucous membrane altered to suit the requirements of the case. Drs. George and Francis Haggan have found in the uterine mucous membrane of all mammalian animals, a deposit of embryonic tissue, existing under the epithelium; to the formative action of this tissue is due the development at the begining of pregnancy of the mucous membrane. Dr. Jacobi studied this in the uterus of a rabbit. Virchow has shown how the capillaries increase in size and that the uterine veins become almost as large as external iliacs. Patenko believes that the nerves or rather the net work of them in the mucous membrane takes its origin from the nerve fibres in the muscular substance. Hunter taught; Lee and Teideman have shown that the nerves increase in size. Kölliker says the

cells are multiplied. Remak and Killian have each demonstrated that the nerves go further into the uterine tissue, and Herschel has clearly proven that the neurilemma is enlarged.

The second scene of this second function shows as remarkable changes as the first; it is the only part of any normal function attended with pain, even when naturally performed; of all the functions it is the most voluminous; the vital power has in it no point of idleness, indeed nothing so fully calls forth the dynamics of life as labor. In this process the neck and mouth, the cervix and the os are first involved; it is appropriate therefore to inquire into the anatomy and province of these parts. The uterus is divided into two portions; the neck and the body, just as in the brain we have a cerebrum and a cerebellum, in the testes we have a testes proper and an epididimis; the neck and the body of the uterus are distinct organs. The principal anatomical feature of the mucous membrane of the os uteri and external portion of the cervix, is a thick layer of epithelium, and the villi with looped blood vessels. The similarity of the mucous membrane of the os to the skin makes it liable to many dermoid diseases. The reduplication of the mucous membrane of the cervix answers the purpose of preventing laceration on dilatation. Dr. Duncan looks upon the cervix as a large, open gland, but a permanently open os and cervix uteri are inconsistent with the presence of the folds between the vertical crests like steps to a ladder, the dove tail approximation of the arbor vitæ which possesses a notable function in a uterus disposed for conception. Authors describe numerous mucous follicles, and to morbid changes in these they refer a variety of diseases, and to them do they ascribe an important part in the production of leucorrhea, but the microscope shows that these supposed mucous crypts are nothing but the termination of the blood vessels.

The cervix uteri is an erectile organ—the os exerts a force of aspiration and thus draws in the fecundating element.

The os uteri contains numerous fibres arranged in circular form—the muscular fibres though of considerable length do not at any point completely surround the cervix or os. This circular arrangement of the fibers without the existence of single fibers sufficiently long to surround the os is said to account for the contracting and dilating power—some have contended that there are longitudinal fibres in the cervix, but Deville, Sappey, Guyon, Farre and Kölliker positively deny that such fibers exist. Killian contends that the nerves of the cervix are nerves of sensation alone, only appreciate pleasurable sensations and are not subject to those of pain. During utero-gestation the cervix softens. Bandl says during that period the upper cervical opening is really the os uteri. Braun, of Leipzig, contends, and his plates show the enlargement of the cervix to accommodate the fetus—that the internal os is obliterated—the cervix forms an inverted dome. Dr. Isaac Taylor on the other hand states that the cervix does not undergo any effacement, that it is the same cervix as regards its length and structure as exists prior to the commencement of pregnancy. Muller has shown that the transition of the cervix uteri into the cavity of the uterus is untenable, the cervix remains intact. Bandl's view is not correct. There is, therefore a marked character of independence both anatomically and physiologically between the body and the cervix uteri. So in regard to the act of delivery; there are those who believe that there comes a fixed point, above which the tissues contract, below which they dilate. This is the os which is temporary—which lies between the expulsive and dilating force—this, some have called the os of parturition. It is too high for the external os, too low for the internal; and by the advocates of this view it has been named intra-cervical. Dr. Taylor says that the cervix at the time of delivery retains its natural length; as the head in labor is forced onwards the folds of the mucous membrane (arbor vitæ) are unfolded. Before the commencement of labor in primaparæ the os is quite closed,

while in parturition it is dilated to such an extent as to admit of the passage of a child's head, a mass whose shortest diameter is three and a half inches, making the line of the circle necessary for its passage eleven inches. This is a dilatation far exceeding that required in the action of the recognized sphincters. Many have thought that there is a mixed power in dilatation of the os, that the longitudinal fibres, when they shorten, act upon the part where there is least resistance. This is the view of Bandl, Barnes and Duncan. The latter says the contraction of the body acts on the cervix as the arms pull on the leg of a boot while the foot is being pushed into it; but all this is opposed by the fact that there are no longitudinal fibres in the cervix. Tyler Smith says truly, the body and fundus of the womb cannot overcome a contracted state of the os and cervix; no more than all the powers united in the respiratory muscles can force the small muscles which close the glottis. In proof of the muscular power in the os and cervix he cites the nature of the hemorrhage in placenta prævia as compared with hemorrhage from the fundus: also the contractions which occur in encysted placenta, and also again in inversion of the womb when the speedy and powerful contractions of the cervix are one of the elements of the accident most opposed to reposition. Dr. Bruns says the os dilates and the uterus contracts and discharges its contents in extra uterine pregnancy.

The treatment of a rigid os uteri shows it dilates not from mechanical pressure—hence instead of using ergot we give chloral—we apply belladonna or use anesthetics. The influence of ergot in producing abortion has been much exaggerated. It seldom succeeds unless the condition for the expulsion of the fetus has arisen in some other way. Often in cases of rigidity, long continued, we have a sudden dilatation, so sudden that even from this effect alone it is difficult to consider it a mere mechanical distention. I have attended Mrs. E, who resides near Cheltenham, during three abortions. She states that previous

to these abortions she had three children at full term, and that in each case she had almost died from hemorrhage. When I first saw her she had been pregnant six months; I found the os well dilated, pains frequent; the presentation was easily made out as that of the breech. Considering that nothing could be done to prevent an abortion, I sat down to await events. In about half an hour I made a digital examination, and, to my surprise, found the os tightly closed. The lady suffered intense pain. I gave her a dose of chloral and told her I would see her again. In about one hour, when I returned, the os was fully dilated, the bag of waters soon ruptured and the breech passed through the os. Everything went on smoothly, until, as the abdomen was passing through the cervix, the os uteri again closed; traction was impossible. This condition remained for fully one half an hour, the body then passed out, and as soon as the shoulders passed through the mouth of the womb, it again closed. The womb now lost its contractile power, the patient grew pale and became much exhausted; the womb filling with blood, it became as large as at the commencement of labor; traction by the body being impossible, the child having been dead for some time, I beheaded it; the os was so tightly closed that it was with difficulty I could introduce the hook end of my forceps into the foramen magnum. Soon the os again dilated; the head came out. Dr. Pharr, my assistant, and myself were deluged with blood.

The two last abortions were in many particulars the repetition of the first. In the second, using the speculum the os contracted from a dilatation as large as a half-dollar, when the parts were directly within the field of vision. I know it is not the modern view, but the old-fashioned idea has much of truth in it; that there is about the dilatation of the os a vital, not a passive power, and the power of dilatation is not more remarkable than the power of contraction. About the cervix there is a distinct power, an individuality of action, and at the same time there is a

sympathy, call it nervous if you please, between it and the body of the womb. Contractility of the fundus is powerfully promoted by dilation at the cervix and the cervix is anatomically and physiologically different from the fundus. The cervix is to the body of the womb as the brain is to the human body—the cervix is the regulator, the governor of the uterine machinery. The body of the uterus becomes therefore subject to irritation by which the power of contractility and retractility are brought into play. This fact is used by obstetricians and gynecologists, for thus uterine action can be provoked, thus endometritis can be caused and many other uterine ills; so also we have in it a remedy for uterine hemorrhage or for the relief of soft intra-parietal hyperplasms. The os, let us repeat, dilates from its own vital power; labor is not a contest between the fundus and neck of the womb. In the os we have not a sphincteric action, able to resist a pressure for nine months and then slowly dilate. There is a vital endowment. Dr. Duncan says a silent or painless labor goes on for some hours or days before the supervention of painful labor. Hunter thought the uterus acted independently of nervous energy and was capable of motion within itself. Avicenna thought labor came on by the command of God. Buffon thought it a condition of maturation. Barnes says it is from the disturbance of maternal circulation. Brown-Sequard says it is brought on by the venous blood coming in contact with muscular fibers. Bard says the uterus possesses an involuntary action only during impregnation. Tyler Smith says parturition depends upon reflex spinal or diastolic action; that the womb resembles in its action the esophagus, that all muscular organs supplied by the sympathetic contract in a vermicular manner, and they contract after the exciting cause is removed. Hunter saw this uterine action in a cat, Muller in that of a rat, and Smith in that of a guinea pig. Goltz says, the chief center for production of labor pains lies in the lumbar cord. Dr. Powers, illustrated by Depaul and advocated by DuBois, taught that the action

was similar to the muscular action of all hollow organs; that it was awakened by the irritation of the cervix. Brown-Sequard has affirmed that the uterus has contracted after removal from the body. The heart, esophagus and intestines may be excited in contraction after death. Smith reports the case of a woman dying during labor and placed in a coffin, and the fetus found next day perfectly expelled. In August, I attended Ann E, suffering from valvular disease of the heart. She was in the eighth month of utero gestation; there were no signs of labor. She died, and twenty minutes after complete death, the uterus expelled the fetus with such force that the child was thrown between the limbs of the mother on the bed. Now the pivotal point of this uterine force is the cervix. Madame Boivin who suffered in her own person, says the pain commenced in parturition around the cervix uteri. Muller, Michaelis and Wiegand say uterine contractions commence at the cervix. All the surrounding and acting circumstances, the power of congestion, increase in size and function of every part, the power and force which is brought to bear upon the fetus, the passage that is made for it, the possibility that all the secundines may not be expelled, the hidden, the mysterious, yet powerful sympathy one part bears with another, the faint line between a function when normally performed and one of abnormality, the important power of the cervix and os, which endowment has such traumatic force brought against it, all these things remind us, indeed they show us what may have, what does have a tendency to the production of disease.

Parturition being accomplished, it cannot be expected that after such a terrific warfare some steps should not have to be taken to place these forces on a peace footing. We have therefore, a process of involution; the whole field has been enlarged and must be contracted, because no longer needed in such large proportions. Nature endeavors to replace herself, to set her house in order for another tenant, to remove as far as possible old structures which

had been added to accommodate the previous occupant. If ever the laws of nutrition, says a late writer, are to be clearly made out, the inquiry will probably be most successfully pursued by investigating the growth and the involution of the uterus; the rapidity with which it diminishes in size after delivery is more marvelous than the rapidity with which it increases after impregnation. The condition of involution interfered with, leads to uterine displacements and a long list of woman's ills; there is a continued pregnancy at work, as it were, and more or less derangement of the liver, lungs, kidneys and stomach. Pregnancy is not a disease of nine months' duration, as taught by Mauriceau, neither is it a condition *per se*, of anemia or of plethora. Cazeaux went too far when he treated a pregnant woman as a case of anemic chlorosis. Females, with remarkable power, bear the loss of blood during parturition; in the act of labor a parasitic organism which has hitherto drawn its nourishment from the female body is got rid of. No one can deny that in pregnancy the transition from the normal condition to the pathological is extremely common. In the pregnant woman there is a tendency to hydremia, to anemia, even to that form which Gusserow has called progressive, to anemia of the brain, from whence, through the excito-nervous system, its excitability is transmitted to the heart, to leucemia. Mosher says, most of the cases of this disease are from disturbances of the generative function. Bennett, Vidal and Leudet have all noticed actual leucemia to follow delivery. How can it be otherwise than that such diseases are produced from the moment of conception by those organs which are never idle or lazy—that during pregnancy all the vital powers are concentrated upon one organ to the development of the uterus on the one hand, and its contents on the other, forming a centre of fluxion towards which all the troubles of the organism converge, by which every function of the body is modified; all these facts sufficiently explain the danger, and determination of the condition; even in menstruation, as

has been shown, there is, so to speak, an increased vitality; all the glands are affected. Ballomin and Portal have frequently observed during this time that there is an enlargement of the spleen. Barnes has called it a mimic pregnancy; all the phenomena are localized in the uterus. The diseases of these conditions in their symptoms are so similar, that Lorain and Tarnier quote cases of peritonitis and purulent infection observed among menstruating midwives during puerperal epidemics; but in true pregnancy, the condition is the more exaggerated; the heart is hypertrophied; fatty degeneration is often produced; sub-acute verrucose as well as acute endocarditis. The blood is altered in its constitution, and singular to say, the worst effects are to be anticipated when the body has not yet reached maturity; that is when it still requires much blood to sustain its own growth and development. The circulation is changed in its dynamics, every gland is enlarged and the due action of them is necessary to the healthy course of pregnancy. Respiration is affected in the increase of carbonic acid, which is a well known agent in stimulating the action of inorganic muscular fibre; there is an increase of nervous action. Lister says, the cerebro-spinal axis is chiefly concerned in regulating the functions of the pigment cells. Pregnancy, said Duncan, is an altered if not a morbid state, and many of the signs of this condition if carried beyond a certain point, assume rapidly the form of disease; it is a state which may lead to disease and is often manifested by a special pathological condition. A careful study of such conditions as accompany and are brought about by utero gestation, affords us much information in general pathology. We know that pregnancy affects the influence of malaria. Barnes has stated that even in the study of albuminuria or Bright's disease, if limited to those cases occurring in men, or in women outside of pregnancy, we should be of the opinion that organic change in the structure of the kidney was an essential condition to the development of the disease. In the early

months of gestation we have the long line of sympathetic diseases; in the latter months the result of anemia and mechanical interference, pressure producing interference with the action of the kidney, causing albuminuria, hydronephrosis, pyelitis and pyelonephritis, or pressure on the vessels producing hemorrhoids, etc., or, on nerves producing neuralgias; add to all these the tension, the swelling of the abdomen, the feeling of weight in the pelvis, the groin and the upper part of the thighs, pain in the region of the kidneys, the loins, who can doubt the tendency for ill influences upon the general system during utero-gestation, and who will contend the point that the profession are not now sufficiently awake as to the important influence of pregnancy upon the female organism, not only in the production of disease, but in rendering diseases more unfavorable in their prognosis. Indeed, the puerperal state is a serious complication in disease. As to the nervous diseases, such as chorea, by the exalted nerve irritability they are brought back; as to mental influences, the associations surrounding the pregnant may be, indeed they generally are, depressing; "that care and grief make the cheek grow pale—and gnaw at life, and health is sad" 'tis not pure fiction, but 'tis true. There is no function so intimately connected both with pleasurable and depressing influences as the generative function. It is the depressing influences, Dewees says, that are meant by the "sorrow of bringing forth."

CHLORAL HYDRATE IN PUERPERAL ECLAMPSIA, INFANTILE CONVULSIONS, CHOREA, EPILEPSY, AND INCONTINENCE OF URINE.

BY H. H. KANE, M. D., NEW YORK.

A KNOWLEDGE of the physiological action of chloral hydrate, enforced by clinical evidences, teaches us that it is of special service in all forms of convulsive disease. It is essentially an anti-spasmodic. We are daily hearing the oft repeated axiom, "The scientific treatment of disease is not the quelling of distressing symptoms by the use of narcotics, but by the removal of their cause." This is well enough as far as it goes; the difficulty being that it does not go far enough. In nearly all the spasmodic diseases that the practitioner is called upon to treat, the true cause of the spasm, be it clonic or tonic, is rarely known. Life is often endangered by the continuance of this its most distressing symptom, and any agent that can control it, is a decided boon to both the sufferer and the too often nonplussed physician.

In some instances, again, while the exciting cause may be fully known, a knowledge of what drug or plan of treatment will effect its removal, is not always had. Take, for instance, the uremic convulsions of acute or chronic nephritis. Does the morphia that is given subcutaneously clear away the cause of the convulsions? Not at all. It simply, by virtue of its action on the nervous centers, controls the convulsive outbreak, until the cause wears itself out, or the system, by some means unknown to us, eliminates or destroys the poison. In the convulsions of children, while we may know that the difficulty originates in some slight irritation in the alimentary canal (which, by the by, receives

credit for more convulsions than it causes), we have not at our command a remedy that will at once remove the offending body or material. Hence it is that this class of drugs is of such great service. Often, indeed, the result is to permanently cure the disease.

PUERPERAL ECLAMPSIA.

Of all the convulsive disorders, one of the most distressing and fatal is puerperal eclampsia. The question as to whether the spasms are due to uremic poisoning or to reflex nervous irritation, is still *sub judice*. The mere fact that albumen has been found in the urine before the attack, does not prove its renal origin, and the finding of albumen in the urine during or after the convulsion, is of less value.

In this disease, chloral hydrate has proved of the greatest service, both in cases with and without albumen in the urine.

Dr. Fauny,[1] after collecting all cases on record up to the time of writing, adds to them seven cases treated by himself, and after a careful study of the subject comes to the conclusion that up to that time the best, by far, of all treatments is that by chloral.

In 36 cases treated by chloral there were 33 cures, making the mortality only 3.7 per cent., as against 36 to 45 per cent. from bleeding, 19 per cent. with anesthetics, and from 26 to 35 per cent. by means of the usual obstetrical treatment.

He finds that large doses are necessary. He uses a mixture in which 10 grammes [℥ iiss.] of chloral hydrate are dissolved in 100 grammes [℥ iij.] of syrup of gooseberry. He gives 4 grammes [℥ i.] of chloral as the initial dose, and then, if necessary, 2 grammes [℥ss] every quarter hour, until 10 grammes [℥ijss] have been taken. He says that it may be given by means of enema or suppository, if it

1 (These de Paris, 1874, No. 50.) Bull. Gen. de Therapeutique, Vol. 86, p. 286.

cannot be taken by the mouth, but warns that in the straining of labor the fluid or suppository may be forced out.

The following gentlemen have used chloral with success in this disease: Drs. John M. Thompson ;[1] Adolph Dumas ;[2] Laborde ;[3] Baudon ;[4] Portal,[5] three cases ; Rabl,[6] Bückard,[6] A. Serre ;[6] A. T. Wheelock,[7] Belfast, Maine[7]; R. Dacre Fox ;[8] Warfield ;[9] J. G. Swayne,[10] Phys.-Accoucheur to Bristol Hospital, 2 cases ; Whidborne ;[11] Charnier ,[12] Purefoy ;[13] J. H. Raymond,[14] 2 cases ; C. C. Tite,[15] Shelbyville, Tenn ; C. H. Hughes,[16] St. Louis, Mo. Baron Paul Von Seydevitz ;[17] A. E. Bower ;[18] Hay ;[19] Milne ;[20] Condereau ;[21] Bourguet ;[22] two cases ; Bartlett ;[23] Allison Maxwell,[24] of Indianapolis, Ind.; Allo,[25] two cases ; Cassaignau ;[25] Campbell ;[26] E. P. Easley,[24] New Albany, Ind., two cases ; James Masten,[27] Westfield, Pa ; C. V. Widding,[28] Stephensport, Ky.; C. A. Bryce,[24] Richmond, Va.; Arch. M. Campbell,[24] Mt. Vernon, N. Y.; Geo.

1 Virginia Medical Monthly ; Medical Brief, Sept., 1877.
2 Bull. de Therap. vol. 89, p. 318, 1875.
3 Bull. de Therap. vol. 90, p. 127, 1876.
4 Bull. de Therap. vol. 94, p. 513, 1878.
5 Bull. de Therap. Aug. 15, 1875.
6 Quoted by Labbie. Bull. de Therap. 1870. T. 2, p. 330.
7 N. Y. Med. Jour. 1871, p. 301.
8 Lancet, Oct., 1870.
9 Philadelphia Medical Times, Feb. 1, 1879.
10 American Practitioner, Feb., 1872.
11 Lancet, Oct., 1871.
12 Edinburgh Medical Journal, July, 1875.
13 Dublin Med. Journal, June, 1878.
14 N. Y. Med. Record, Dec. 1, 1869.
15 Am. Med. Bi-Weekly, Nov. 9, 1878.
16 St. Louis Med. and Surg. Jour., Nov., 1879.
17 Medical Times and Gazette, April 16, 1870.
18 Lancet. Aug. 11, 1877.
19 Practitioner, 1871, p. 191.
20 Quoted by Simpson in Edinburgh Med. Jour., May, 1870.
21 Bull. de Therap., vol. 86, p. 125.
22 Gaz. des Hopit., 1876, p. 980.
23 Buffalo Med. and Surg. Jour., Jan., 1880.
24 *By Letter.*
25 Gaz. des Hopit., 1875, p. 18.
26 Lancet, Nov., 1870.
27 Med. and Surg. Reporter, July 14, 1877. 28 *Ibid.* Aug. 4, 1877.

W. Elrick,[1] Hickory, Iowa; J. Foster Bush,[1] Boston, Mass.; J. H. Arton,[1] Hamilton, Bermuda; J. W. Slinker,[1] Mt. Ayr, Iowa; W. H. Travers,[1] Providence, R. I.; J. E. Dundas,[1] Cambridge, Wis.; Polaillon;[2] J. M. Pace,[1] Dallas, Texas; Q. C. Smith,[1] Austin, Texas, with lithium bromide. Dr. DeForest Willard,[1] of Philadelphia, failed to obtain good results from its use.

In the cases given by Laborde, Baudon, Portal, Bartlett, and Cassaignau, mention is made of the presence of albumen in the urine. In Bartlett's case there seemed to be an hereditary tendency to this disease in a severe form. He says her mother died at term of puerperal convulsions—mother's sister also of same; grandmother, maternal side, of same; and mother's niece, cousin of Mrs C., died also of same—a somewhat remarkable history.

Londeneau[3] relates the following: The patient was seized with eclampsia as the head of the child was descending to the inferior strait. The forceps were applied and the delivery accomplished without difficulty. In a little while a second attack supervened and a large dose of chloral was given. The convulsions did not recur. There had been a large quantity of albumen noticed in the urine before confinement. Under milk diet this rapidly disappeared. Londeneau has used this remedy in a great number of cases and with such success that he commends it highly to the profession.

Chouppe publishes thirty-six cases treated by chloral. In sixteen of these, this remedy was associated with other remedies. In twelve cases, where no medicine except chloral was used, all recovered.

Blot,[4] utterly condemns the induction of premature labor in these cases and thinks highly of the use of chloral hydrate.

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1 *By Letter.*

2 Quoted by McDonald, Am. Jour. Insanity, Jan., 1878.

3 France Medicale, April, 1879, p. 233.

4 Gaz. des Hopit., 1870, p. 170.

Portal,[1] after relating three cases of recovery says: "In six previous cases treated by leeches and inhalation of chloroform, all died."

Charpentier,[2] (These) after relating seven cases of this disease successfully treated with chloral hydrate, adduces statistics showing the superiority of chloral over chloroform. In the latter case there are but 50 per cent of cures.

Liebreich,[3] accepting Frerich's theory that these convulsions are due to ammonia in the blood from decomposition of the urea, inclines to the belief that besides its action by setting free chloroform, some hydrochloric acid is set free also, thus neutralizing the ammonia.

The following gentlemen have used chloral hydrate in this disease without effect. McGibbon;[4] Sidey;[4] Kirk;[5] Dujardin-Beaumetz;[6] Pujos[7] and Gassat.[8]

Dr. More Madden[9] condemns the use of this drug in puerperal eclampsia, on the ground that in severe cases it is of no service, and gives rise to a neglect of other measures. He has seen severe abscess follow its use subcutaneously.

Dr. Playfair,[10] while admitting the benefit to be derived from chloral in puerperal convulsions, raises the question as to whether it does not, when used freely, tend to disorganize the blood and eventually contribute to a fatal result. Dr. Stephen Monckton[11] gives a case which he believes supports Dr. Playfair's views. It is at best unsatisfactory, and of no scientific value, from the absence of definite facts.

In some of these cases, successful and unsuccessful,

1 Op. cit.
2 Med. Times and Gaz., March 8, 1873.
3 Brit. Med. Jour., March 2, 1872.
4 Edinburgh Med. Jour., 1870, p. 1139.
5 St. Louis Eclectic Med. Jour., Nov., 1879.
6 Bull. Gen. de Therap., vol. 89, 1875, p. 426.
7 Bull. Gen. de Therap., vol. 89, 1875, p. 366.
8 Gaz. des Hopit., 1875, p. 18.
9 Dublin Med. Jour., June, 1878.
10 Lancet, May, 1871.
11 Lancet, June, 1871.

chloral was used subcutaneously, owing to the fact that it could not be given by the mouth, and was rejected by the rectum. This drug is certainly worthy of a more extensive trial in this disease. It must be borne in mind, however, that small doses are quite ineffectual, the system tolerating large amounts in the condition productive of convulsions. After the first few doses it might be well to combine the chloral with bromide of potassium.

INFANTILE CONVULSIONS.

The testimony respecting the value of chloral hydrate in the treatment of infantile convulsions, is abundant and very favorable. It has been used with success by E. P. Easley,[1] New Albany, Ind.; W. A. Hawes,[1] N. Y. C.; J. H. Arton,[1] Hamilton, Bermuda; Finley Ellingwood,[1] of Manteno, Ill. (by rectum, with potass. bromid.); C. A. Bryce,[1] Richmond, Va.; A. Ady,[1] West Liberty, Iowa; J. M. Pace,[1] Dallas, Texas,; D. N. Kinsman,[1] Columbus, Ohio; J. R. Sample,[1] Summit, Miss.; W. H. Travers,[1] Providence, R. I.; and C. H. Greenough,[1] N. Y. C.

Dr. Geo. N. Monette,[2] of New Orleans, from an extended experience with the drug in this class of affections, speaks very highly of it. He uses it by the rectum.

Löwenstamm[3] (*Medicin.-Chirurg. Centralblatt, 1876*) relates the case of a child sixteen days old, who was having convulsions every ten minutes. He gave two grains of chloral every hour until the convulsions ceased, and the child made a good recovery. The mother had already lost two infants of about the same age from the same disease. From a large experience in similar cases, Löwenstamm speaks highly of the curative powers of chloral.

Dr. Jos. G. Pinkam,[4] in the case of a child four months old, who had convulsions following measles, chloral effected a rapid cure. Dr. Samuel P. Johnson[5] relates a case

1 *By Letter.*
2 Medical Brief, Sept., 1877.
3 London Medical Record, Nov. 15, 1876.
4 Boston Med. and Surg. Jour., 1871, p. 173.
5 Medical Brief, Oct., 1877.

successfully treated by chloral enemata. Dr. R. L. Pinching,[1] of San Francisco, Cal., has used it with great benefit in this disease. The late Dr. E. R. Peaslee[2] had a case of spasms in a child during the course of scarlatina. The drug was given in three and a half grain doses, and the child was kept under its influence for twelve days. Dr. W. A. Harvey,[3] of Janesville, Wis., reports one case where chloral was used with success.

Dr. Charles A. Rayne,[4] Assist. Phys. to Manchester General Hospital for children, reports two cases of convulsions in children, that were cured by chloral after all other remedies had failed. The first was a boy aged five years, the second a girl aged nine years. In the boy's case, the fits, which were unilateral, were attributed to a blow on the head. In the girl's case, the spasms were bilateral, and chiefly affecting the upper part of the body. Consciousness lost. No aura. Expulsion of worms from bowels gave but partial relief. The convulsions were most frequent in the early morning; but also during the afternoon and night. There would be from fourteen to eighteen and from twenty to thirty, respectively, in the twenty-four hours. The muscular phenomena were such as were artificially obtained by Prof. Ferrier on stimulating certain frontal and parietal convolutions of the brains of some of the lower animals. The amount of chloral hydrate used was from five to ten grains, and with perfect success. Dr. C. C. Tite,[5] of Shelbyville, Tenn., relates six or seven cases where he has used it in this disease with great success; also in a case of tetanus infantum.

Dr. J. L. Bauer writes:[6] "I have great confidence in the effects of chloral and bromide potassium administered internally, but some cases resist its internal administration.

1 *By Letter.*
2 New York Medical Record, 1871, p. 164.
3 Boston Med. and Surg. Jour., 1871, p. 194.
4 Lancet, March 13, 1875, and Aug. 26, 1876.
5 American Medical Bi-weekly, Nov. 9, 1878.
6 St. Louis Clinical Record.

One case in point is that of a little boy, aged about seven years, who had been treated in all manners and by all means till complete unconsciousness. The bowels were constipated; he had passed little urine; the skin felt clammy; the temperature was below normal; pulse slow and weak until the commencement of the paroxysm, when it increased in frequency and fulness. The attack commenced at the angles of the mouth, going to the facial muscles and those of the eye, and then to the right and left side of the body until the child was convulsed *en masse*. Realizing the inadequacy of prescribing any more of the pet prescriptions, I determined to inject four grains of hydrate of chloral hypodermically. Hardly had this been done one and a half minutes, when every bad symptom disappeared, and the boy slept soundly for about four hours. He then awoke, asked for some water, and slept soundly until the next morning, experiencing no bad effects from the procedure. A small abscess at the point of insertion ensued, and was readily healed. I have tried the same method in several cases since that time, and feel some confidence in its use."

Dr. A. A. Smith,[1] in a paper read before the New York Academy of Medicine, on Convulsions in Children, has found the following of service:

℞. Chloral hydrate
Potass bromid. āā gr.i
Sodii bicarb. gr.i

For a child under four months of age, he recommends paregoric first, in full doses.

Dr. J. Lewis Smith,[1] in discussing the paper said that the subject of treatment was one of the greatest importance, because we were so frequently called upon and compelled to treat convulsions without being able first to ascertain the cause. Ordinarily we might regard the seat of the cause as being in the intestine, either overloading of it or taking indigestible articles. So that at first, it was advisable to

1 Medical Gazette, May 15, 1880, p. 312.

cause full evacuation of the bowels. As to the treatment of the trouble itself, great advances had been made in the twenty-five years, not so much from our increased knowledge of the disease as from the advance in pharmacy; this was especially true of the introduction of chloral hydrate and potassium bromide. As to the relation of teething to eclampsia, in the last half dozen years he had not carried a gum-lancet, nor had he found any occasion to use one, as where a child was on the point of having a convulsion we might prevent it by giving the bromide in large and continued doses, and he had never seen any bad results follow from this course. Some years ago he had ordered a drachm of the salt, in sixteen doses, for a child one year old; the mother by mistake gave it all in one dose, and in two hours the child was sitting up. As to the use of chloroform as compared with the hydrate of chloral, by using the latter he was relieved from being compelled to stay three or four hours with a patient as he used to do. His plan, if called to a child in convulsions, was to give bromide and chloral every five or ten minutes, and if the convulsions were not soon controlled, to administer hypodermics of chloral, and there was not as much danger as from chloroform, as with the latter there was risk of paralyzing the respiratory centers. Six or eight years ago he gave up chloroform, from being very much frightened while administering it to a child two or three years old, which ceased breathing. For a child of two years he generally ordered the following:

℞. Chloral hydrate. - - - ʒi.
Aquæ - - - - - - - ʒiss.
M.

So that each teaspoonful contained five grains. This was used as an enema; if it was retained it was surprising to see how readily and speedily it acted. In ten minutes the convulsions ceased in the face, two minutes later in the arms, and then in the legs. He then continued the treatment with the bromide, if necessary. By pursuing this plan, with cases which he had seen in the last two or three

years, he had not found it necessary to stay more than half an hour.

Dr. Saml. T. Hubbard,[1] also stated that he had used chloral with good effect.

Dr. F. E. Beckwith,[2] Resident Physician at the Nursery and Child's Hospital, of this city, writes that he finds it one of the most valuable agents that we possess in uremic eclampsia. Bouchut[3] relates the case of a child attacked with acute nephritis from cold. She was suffering from hallucinations, and then uremic convulsions. A complete cure was affected by means of chloral. He has also seen uremic convulsions in adults cured by the same drug. He advises forty-five grains a day for children, and from forty-five to ninety grains for adults.

Dr. S. Henry Dessau,[2] of this city, endeavors, in these cases, to find the cause and treat it, and at the same time gives chloral to quiet the irritable state of the nervous centers. He gives from three to ten grains every two hours, or oftener, according to the age of the children and the severity of the disease. He remarks that children bear larger proportional doses of chloral than adults. In hysterical convulsions, Drs. J. H. Taggart,[2] Yuma, A. T.; W. A. Hawes,[2] N. Y. C.; and C. A. Bryce,[2] have found it of service. In a case of hysterical convulsions, complicated with the opium habit, Dr. Taggart kept his patient under its influence for a week.

EPILEPSY.

Chloral hydrate has proved of some service in epilepsy. It seems better suited to cases *petit*, than to cases of *grand mal*. Wiedner,[4] of Jena, reports the case of a girl aged nineteen, with undoubted epilepsy. It was completely cured by chloral given in small doses, before the time of expected attacks.

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1 Medical Gazette, May 15, 1880, p. 312.

2 *By Letter.*

3 Gaz. des Hopit., 1875, p. 618.

4 Deutches Archiv. fur Klin. Med., Heft. 1, 1870.

Dr. J. E. Bowers[1] writes: In epileptics, chloral has been found useful to control the excitement following the fits, but I have not noticed any benefit in controlling the fits themselves. The only patient of this class to whom the remedy was given continuously for any time, was a case of *petit mal*, which seems to have made almost a complete recovery under the combined use of chloral and the bromide of potassium. Chloral gr. xx. Bromid. gr. xxx. t. i. d.

Dr. J. M. Wallace[2] used enemata of chloral hydrate in a number of cases of epileptic convulsions, at the Hillsborough Asylum, with success. He gave the drug by means of enemata.

Nathaniel Alcock[3] relates the case of a man suffering from epileptic fits supposed to be due to a blow on the head. In this case, the use of stimulants always caused an attack. Small doses of chloral proved of marked service in modifying severity and delaying these spasms, and the final result was a cure. The two cases reported by Rayne[4] have been already referred to.

Dr. Wm. A. Hammond[5] reports a case of epilepsy cured by chloral after the bromides had totally failed. He has found it of service in other cases also. In talking with Dr. Hammond, he tells me that he has used no chloral whatever since 1871, at which time a patient of Dr. Needham's, not an epileptic, whom he saw in consultation, died from its cumulative action.[6]

Dr. H. H. Bannister,[7] of Chicago, found continued small doses of chloral and the bromides, of service in this disease. C. H. Hughes,[7] of St. Louis, Mo., has used it during the paroxysms. F. L. Forsyth,[7] of Providence, R. I., has found it of no service, while James Donaldson,[7] of London, England, has had very good results with it.

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1 Northwestern Med and Surg. Jour., Dec., 1871.
2 Quoted by C. H. Hughes, St. Louis Med. and Surg. Jour., Nov., 1879.
3 Med. Times and Gazette, Feb. 24, 1872.
4 Lancet, March 13, 1875; August 26, 1876.
5 New York Medical Record, 1870, p. 499.
6 Jour. Psycholog. Med., 1871.
7 *By Letter.*

Dr. E. C. Spitzka, of this city, tells me that chloral is an excellent adjunct to the bromides in the treatment of epilepsy, less bromide being necessary. The same fact was demonstrated by the report[1] of Dr. E. C. Seguin to the New York Therapeutical Society.

Formula employed:

℞	Potass bromid.,	ʒi.
	Chloral hydrat.,	ʒss.
	Aquæ,	ʒvii.

M. Sig. ʒiv-vi daily.

Observations by A. McLane Hamilton, Dr. J. C. Shaw, E. C. Seguin, T. McBride, and N. B. Emerson, twenty-eight cases. This mixture warded off attack as well as bromides alone (bromide ammonium being used in same quantity as chloral, in its place). Reflex irritability of throat reduced as well by bromides alone, as by bromide and chloral.

Chloral seemed to beneficially modify evil psychic effects, and prevent decided acne from bromides. No more than forty-five grains of each in twenty-four hours. Dr. J. Wrixon[2] reports the case of a man aged fifty-four, where epilepsy of some years' standing, and serious acute mania were rapidly cured by chloral hydrate. Dr. John Barclay[3] has found chloral of service in epilepsy.

CHOREA.

In this disease, chloral has been used with varying success. The failure to cure, in some cases, is possibly due to the fact, that while the chloral is being used, nervous tonics are not given.

Dr. Wm. H. Day,[4] Physician to Samaritan Hospital for Women and Children, says of it: "There can be no question whatever, that hydrate of chloral is a valuable remedy in some cases of chorea, particularly those where vascular excitement is present and the pulse is good. Dr. Althaus

1 New York Medical Record, May 2, 1878.
2 Lancet, Nov. 25, 1876.
3 Practitioner, 1872, p. 297.
4 Medical Press and Circular, May 21, 1879, p. 399.

considers that the theory of chorea is explained by active hyperemia of the corpora striata and the parts surrounding the fissure of Sylviu's, and that the beneficial action of hydrate of chloral is to be attributed to the anemia which it produces in these structures. Its danger as a depressant is nothing, compared to the repose and rest which it ensures to the nervous system, lessening, as it does in suitable doses, the extreme agitation of the limbs and the violence of the choreic movements. Sleep so obtained, gives the necessary time for repair to over-excited parts, and will be found to succeed when the morphia yields no result."

Dr. D. N. Kinsman,[1] of Columbus, Ohio, has found chloral a very uncertain remedy in this affection. Walter Edmunds[1] has used it subcutaneously with very good effect on the diseases—abscesses formed at the points of puncture. James Perrigo,[1] of Montreal, used it in one case with success. Other remedies were used, however.

Dr. Britton,[2] of Driffield Cottage Hospital, had a very severe case of chorea in a girl aged nine years. From June 24 to April 10, it persisted under the free use of bromides, digitalis, zinc, strychnia, etc., etc., etc. Would fall out of a chair, and could neither talk nor walk. Could not eat, owing to great difficulty in swallowing. Was given ten grains of chloral at night. Good sleep. Better the next day. Treatment continued for four nights, when the child was discharged cured. This was April 14. No return up to Oct. 6.

Dr. Bouchut[3] says (*Gaz. des. Hopitaux*, Aug. 13, 1878), that ten years use of chloral in bad cases of chorea, has confirmed his previously stated good opinion of the efficacy of the drug. Its long continued use produces neither loss of appetite, irritation of stomach, nor headache. Dr. Russell[4] reports a case of chorea in a healthy woman during the early months of pregnancy. She had never had rheu-

1 *By Letter.*
2 Jour. Psycholog. Med., 1871, p. 155.
3 Med. Times and Gaz., Sept. 7., '78. Monthly Abstract, Nov., '78.
4 Practitioner, 1870, p. 119.

matism. Chloral effected a cure. Bricheteau[1] says that chloral is the most prompt and efficacious reducer of spasm and excitement in chorea, known. Dr. Sieveking[2] cured with chloral a girl aged 12, in whose case all other remedies had failed. Goeltz and Auger[3] record a severe case of chorea treated successfully by enemata of chloral after all other means had failed. Two clysters containing 5i. each, daily, for fifteen days, caused cessation of all movements. Dr. Wm. A. Hammond[4] reports two cases, in one of which the remedy acted well; in the other it was of no value.

Dr. Chas. Murchison,[5] in a clinical lecture at Middlesex Hospital, showed a patient who had chorea complicated by pneumonia and bronchitis; after failure of other remedies, a rapid improvement followed the use of chloral.

Dr. J. B. Carruthers[6] reports a case of chorea in a girl aged 14 years, speedily cured by chloral. Althaus[7] found slightly better results in chorea with chloral than with the zinc or ferro-arsenical treatment.

Prof. J. Lewis Smith[8] believes that chloral is of service only as an hypnotic.

Robert Bridges,[9] M. B., Oxon., relates two cases of violent chorea. (Patient's ages, eighteen years and twenty years.) Chloral in large doses (grains, thirty, often enough to give thorough and prolonged sleep.) Cure of one in five days; other seen on 19th day of attack; well on 22nd day. Only 140 grains in four nights in one case. He calls this large doses. He believes that the most important thing to do is to procure sleep, and allow the nervous system to right itself. He thinks small doses often repeated, where sleep is not procured, very dangerous.

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1 Bull. Gen. de Therap., Nov. 30, 1869.
2 Lancet, Aug. 26, 1876.
3 Edinburgh Med. Jour., Aug., 1876.
4 New York Med. Record, 1870, p. 499.
5 Lancet, Feb., 1871. 6 Lancet, Aug., 1870.
7 Med. Times and Gazette, Dec. 3, 1870.
8 Diseases of Infancy and Childhood. Phila., 1879.
9 Practitioner, 1872, p. 172.

Dr. Farquharson[1] endorses Dr. Bridges' treatment of chorea by means of large doses of chloral, and refers to Prof. Gairdner's case (*Glasgow Med. Journal*, 1870). Girl, aged 8 years; peculiarly aggravated form of chorea. Zinc, arsenic, and calabar bean were of no service. Small doses of chloral were then tried, and gave but partial relief. One night, through a mistake of the nurse, 45 grains were given. Most alarming symptoms ensued, and death was feared, but she finally recovered. The chorea was markedly benefited, and in another day a complete and permanent cure resulted.

Labbée[2] says that his preceptor, Rogers, has not had good results with chloral in this disease, and says that as great success as has been claimed from chloral has resulted from the use of bromide of potassium; and hence the necessity for waiting for further trials, and judging dispassionately. (This was in 1870.) Dr. West,[3] in his Lumleian lectures, says that "the whole class of antispasmodics—henbane, belladonna, conium, chloral, and bromide of potassium—had no other effect than to cause sleep." M'Veah and Hayden[4] have used chloral with success to produce sleep in choreic subjects. Hubert Guérin[5] commends chloral and bromide of potassium as quieters of nervousness and producers of sleep in chorea. He says, however, that they have no direct curative effect. H. C. Wood, Jr.,[6] believes that chloral and bromide of potassium are of service in this disease, simply as sedatives in severe cases.

I think we must conclude from the testimony here given that chloral is a curative agent in some cases, and that in others it is of no service other than as an hypnotic and sedative.

A curious and interesting case that is possibly a little

1 Practitioner, 1877, p. 302.
2 Du Chloral. Bull. de Therap., 1870, T. 2, p. 330.
3 Practitioner, 1871, p. 49.
4 Dublin Med. Jour., Jan., 1879.
5 (Pamphlet, 1876). Practitioner, 1877, p. 132.
6 New York Medical Record, 1877, p. 786.

out of place here, is related in the *Gaz. Med. Ital. Lomb.*, 1877: G. L———, aged 22, admitted November, affected with hystericismus, unyielding to any means employed; menstruated at 11 years; she enjoyed good health till 15; at this time suppression of menstruation, owing to a fright; later, hemoptysis; for the last four years various troubles, affecting principally the nervous system, such as gastralgia, hysteralgia, etc.; menstruation ceased. The patient found relief only in the application of leeches and sometimes bleeding. During the forty-four days she was watched at the hospital, she was excessively weak. She had neuralgic stitches, oftenest localized in the lumbar, epigastric and cardiac regions; lipothymia at the slightest move, the least moral emotion; almost continuous dyspnea; from time to time spasmodic fits, lasting one or more hours, during which opisthotonos would manifest itself; at the end of these fits the patient would awake much tired, still gay. First there was tried asafœtida, then sulphate of quinine; at her express wishes, bleedings were performed upon her. Dec. 18, the administration of pure chloral was attempted (1 gramme dissolved in 100 grammes of water, to be taken by spoonfuls, from hour to hour). After the first few spoonfuls the intense dypsnea to which she was a prey, disappeared promptly. Soon the amelioration continued, the patient could move, leave the bed, the spasmodic fits disappeared, and actually there remained nothing but a little cardialgia and lumbar pains, but G——— declares she feels very well. She still continues under watch.

Dr. A. Breiss,[1] of the General Hospital, has used chloral with great success in hysterical chorea, after other remedies have failed.

CHLORAL IN INCONTINENCE OF URINE.

Chloral is of value in that form of incontinence where there is a hyperesthetic condition of its mucous membrane. While chloral is used, other remedies directed to

1 Boston Med. and Surg. Jour., 1870, p. 257.

neutralizing a too acid urine, expelling worms from the rectum, etc., etc., should not be forgotten.

Dr. Giralonio Leonardi[1] has found chloral a valuable remedy in nocturnal incontinence of urine. He gives children from five to ten grains before putting them to bed. In adults, proportionately larger doses were used. He says that it must be given for several successive nights. Dr. Theo. West,[2] on the contrary, found that chloral not only did not cure the disease, but decidedly aggravated it.

Chloral hydrate is recommended by Dr. William Thompson (*Lancet*), as a remedy for nocturnal enuresis depending (as many cases do) chiefly upon habit. Chloral, taken in fifteen grain doses at bedtime, by "ensuring the bladder and sphincter vesicæ a quiet night's rest, enables them in a few days to regain their normal tone, and the patient his wonted vigor, so that he may retire to rest without his former dread of a disturbed night, or of awakening in the morning to find he is a defaulter to the laws of cleanliness and health." Two cases are given—a girl and a boy, aged respectively twelve and thirteen, otherwise healthy—in which this treatment effected cures in less than a fortnight. He again writes[3] that chloral serves him well in incontinence after a three years trial of it. He says, however, that it is only suited to simple cases where there is no organic lesion. He uses one full dose at bed-time.

Dr. Bradbury,[4] of Aldenbrookes Hospital, Cambridge, Eng., relates the case of a girl who had been troubled with incontinence of urine for nine years. One dose of fifteen grains every night was ordered; after the first dose the trouble never appeared again. Dr. Vechietti Eduardo,[5] has used chloral in incontinence of urine in children successfully, in several cases. He believes the affection is due to hyperesthesia of the bladder, which condition the chloral controls.

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1 Druggists' Circular, Nov., 1873.
2 America Practitioner, Oct., 1873.
3 London Lancet, Sept. 20, 1873.
4 (Brit. Med. Jour.) New York Med. Record, 1871, p. 131.
5 Boston Med. and Surg. Jour., 1874, p. 635.

Dr. F. Delmont,[1] of San Buena Ventura, Cal., noticed an interesting fact in this connection. In three cases where chloral was given for other disease it caused retention of urine. This is unusual, the rule being for an increase in the amount of urine and perfect freedom in passing it.

Dr. Tidd,[2] reports the case of a young woman, in the ninth month of pregnancy, who had not urinated for twenty-four hours, as a result of which the bladder was enormously distended. Catheterism was tried, but failed, in consequence of the swelling and of the deviation of the urethra. Puncture of the bladder was proposed, but the patient refused to consent to it. Ten grains of chloral were then ordered every half-hour. It produced a deep sleep, during which the patient passed unconsciously an enormous quantity of urine. The evacuation commenced five minutes after the second dose of the solution. The retention did not recur, and seven days later the patient was delivered of a healthy child.

Dr. Geo. N. Monette,[3] writing to the *Medical Brief*, reports the successful treatment of this mortifying habit with tincture of cantharides combined with chloral hydrate.

The tincture of cantharides should not be used in maximum doses, nor until strangury is provoked—per contra, the age and physical development of the child should be taken into consideration. In enuresis he has used the cantharidal tincture alone, to verify its efficacy, and has also used it to palliate the strangury often present in cystitis; also in cases of enuresis complicated with modified cystitis or catarrh of the bladder. The chloral hydrate exerts a palliative or antidotal influence, preventing the too violent specific action of the cantharides. In all of the cases of cystitis which came under treatment, in both male and female, he found enuresis and strangury present. The chloral may possibly act locally, through the medium of the renal secretion.

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1 *By Letter.*

2 (Jour. de Bordeaux). New York Med. Record, Dec., 7, 1878.

3 Braithewaite's Epitome, March, 1880.

Dr. E. L, Partridge, of this city, tells me that he has had the most excellent success with chloral in this disease. In the case of a boy æt. 12 years, syphilitic, who has wet the bed as long as he could remember; a single dose at bed-time cured him thoroughly. In other cases he has had none but good results.

CASES FROM PRACTICE.

A COLORADO ITEM.—SCALPED BY A GRIZZLY BEAR.

By Chas. H. Dixon, M. D.

Last Summer while in Colorado one of the men in the same camp had an encounter with a "silver tip" or Colorado grizzly; the result of which was as follows:

The unfortunate Mr. L.——while out prospecting on Friday June 18th, went to look for game. Hearing some noise he mistook it for an elk, and before he could get out of the way a large bear was upon him. She had cubs with her, and had been frightened by one of the party. He fired at her which only made her more ferocious, and she handled him in a very unceremonious manner, and would have killed him outright had she not been called away by her cubs.

They were only about seventeen miles from camp, but as the trail was very broken, they did not reach there before 12.30 A. M; the accident was before 6. P. M. His friend had tied a kerchief over his head and stopped the bleeding as well as possible, but notwithstanding he lost a considerable quantity of blood.

The wounds were numerous and severe. The slighter ones consisted of several claw prints on the back and left hip, but were not deep. The right ear was torn from the head for a half inch cutting the anterior branch of the auricular artery; another cut was posterior to right ear $1\frac{3}{4}$ inches long, severing the posterior auricular. On left arm there was a bite tearing anteriorly the

fibers of the biceps 1½ inches above the elbow, and a tooth mark posteriorly two inches above the olecranon process and quite deep. The most serious wound was that of the scalp which extended from the frontal eminence posteriorly 4 inches, 3½ inches to the left and one inch to the right of the median line; and another cut nearly connecting these, thus making a piece nearly the size of the hand attached to the rest of the scalp by a pedicle only one half inch wide. There was a portion of skull 1½ inches wide and 2½ inches long, denuded of periosteum.

The head and arm were the only wounds which received much attention. That of the arm at first suppurated a good deal but at the end of about one week was all well. The head was shaved and cleansed as well as possible, and the flap held in position by means of adhesive strips, but there was very little hopes of it living, as the blood supply was nearly cut off. The wound was dressed with as good carbolized dressings as one could get in the "hills." The following morning about one quart of urine was drawn off. The urine had to be drawn for several days. He was of a phlegmatic disposition, his normal pulse being only 64, and this had a good deal to do with his low pulse during his illness.

When he came into camp he was rational, pulse 74, pupils evenly dilated and responded equally to the light, suffered very little pain, but felt weak from loss of blood. He rested very well the rest of the night and in the morning there was internal strabismus in left eye, which was very marked and lasted about three days. The dressing was not touched until the 20th, and the flap then showed signs of dying and in a few days more it had sloughed off and I was afraid the denuded bone would die. He was given iron and quinine. Antiseptic water dressings were kept on for about two weeks, during which time numerous granulations were thrown out, and patient was doing well; appetite, pulse and temperature were good, and he showed no signs of erysipelas or septicemia, nor did he once complain of pain in the head. He was doing better than any one could have expected. About this time I had to leave him, being called into town; and the day before he heard that his uncle was dead; this owing to his peculiar condition proved to be very deleterious to him. This was on the 3rd of July, and there was a good deal of firing; and all had the effect of making him

delirious, and chloral and bromide was given, before we could quiet him, but in the morning when I saw him he was quite rational, and I thought with care he would get along very well. I was gone from Sunday till Thursday evening, and then found him in a very low condition, delirious and recognizing no one. He had a typhoid tongue; sordes on the teeth, high temperature, glassy eye, subsultus tendinum, and would swallow nothing which was not forced.

He became delirious the day I left and remained so; he was incessantly talking on religion. I afterwards learned that he went insane on this subject at a revival meeting several years ago. During the time I was away he received neither nourishment nor rest; they said he had not more than a few hours sleep during this time. He was given belladonna and bromide of potassium; also quinine and iron, beef tea and such remedies were administered. He showed no signs of returning consciousness until Saturday. His temperature was reduced by sponging of the body and the pulse rarely went above 84. He was rational until Sunday, when he became unconscious and remained so till Tuesday, when he died.

There were very poor accommodations for a person in his condition in the "hills," and only a limited supply of drugs, and he might have fared otherwise if he had more and better attention.

INCISED, PENETRATING WOUND OF ABDOMEN

BY E. F. HAUCK, M.D., ST. LOUIS.

H. P., age 36, single, admitted to City Hospital, Sept. 26th, at about 3. P. M. Find an incised, penetrating wound of abdomen. The cut begins just above Poupart's ligament, external to spine of pubes (left of median line of body) and runs in a curve upward and somewhat inward, a distance of about 3½ inches, terminating near middle line about 2 inches below the umbilicus.

From it, several loops of small intestines with mesentery

protruded; length of intestines would probably measure six or seven feet. Attempts were made to replace same, without the administration of ether. Morphia was given hypodermically and the attempt then made, but proved unsuccessful; the hairy portions around wound were covered with oiled silk. An attempt was made to replace them by means of elastic pressure with a rubber bag; did not succeed. Ether was then administered. I then enlarged opening on a grooved director, cut a constricting band of connective tissue, the hair was cleanly shaved from parts surrounding wound, and intestines were then easily replaced. Drainage tube $\frac{1}{3}$ inch in diameter was then inserted whole length of wound, which was united over this, by means of six pin sutures. Dressing was applied under spray and according to Lister as near as possible. Intestines before being replaced were much congested, and numerous shreds of lint and hair adhered to them; these had to be picked off as well as possible. The intestines had been covered by a thick layer of lint before his admission to Hospital. I judge that the interval of time elapsing between the receival of wound and its closure, was at least one hour and a quarter.

Two hours after operation, pulse was 80, feeble, respiration normal, patient conscious and perfectly rational. He attempted to urinate, but could not, and the attempt gave him pain. I drew off his urine with a soft gum catheter and removed $1\frac{1}{4}$ pints of dark, sanguineous urine, of slightly offensive odor. Again at 11.30 P. M., urine of the same character. Sept. 27th, 10 A. M. Drew off two pints of *clear* urine; 8.30 P. M., pulse 75; temperature 37.5° C. (99.5° F.) urine drawn, clear. I may state shortly, that his temperature at no time exceeded $37\frac{3}{4}$° C; (say 100 F.) pulse never exceeded 100. He had symptoms of slight local peritonitis only; had occasional slight pains the first few days; no anorexia; wished to eat and drink more than I would allow.

He was kept at first on fifteen minim doses of tr. opii, every two hours, day and night. Liquid nourishment, milk gruel, beef-tea; later, crackers.

He had no evacuation from the bowels, until Oct. 3rd, then had one after an enema of lukewarm water carefully introduced. This was repeated daily for a time. Kept him on opium, gradually reducing dose until about Oct. 15th. Gave him mild diuretics several days.

First dressing of wound was removed Oct. 2nd, seven days after it was applied; there was very little secretion, very little swelling or inflammation around the wound, which had united in upper three-fourths. Drainage tube was removed at this time. Pins were left in and wound covered by hygroscopic cotton and comp. tinc. benzoin, by Dr. Dean; I then completed dressing antiseptically.

Removed pins Oct. 9th. Oct. 11th, has had several normal evacuations. Oct. 19th, only a slight superficial granulating surface left to heal. Walks about. Discharged perfectly well Nov. 2nd, 1880.

The points of interest in this case are as follows, viz: 1. No shock. 2. Length of time between receival of wound and its closure. 3. Shreds of lint, hair etc; some few certainly entered peritoneal cavity. 4. Little or no fever at any time, little pain.

EDITORIAL.

VOL. V. JANUARY, 1881. NO. 1.

CEREBRAL LOCALIZATIONS.

It is in the field of neurology that the greatest advances have been made in medical science during the last few years; and among the most interesting researches are those which refer to the localization of certain functions in particular portions of the brain.

The announcement by M. Broca that the faculty of language is situated in the left hemisphere of the brain, and more definitely, that it is situated in the posterior third of the third frontal convolution, provoked, at the time, much and animated discussion and controversy. This has, however, passed, away and is a matter only of historical interest, as the result of comparing

the clinical phenomena during life with the lesions observed after death has conclusively demonstrated the correctness of Broca's statement.

Although this fact has been placed beyond question by these clinico-anatomical observations, it is still a matter of interest to note that recent researches under the direction of M. Charcot in la Salpêtriére upon certain hysterical patients gives additional demonstration upon the living subject, that the faculty of language is located in the left hemisphere of the brain, not upon the right.

It is well known that M. Charcot has for some time been making investigations with reference to the subject of hypnotism and catalepsy, as these conditions are developed in hysterical patients. These patients, as a rule, who besides the severe attacks, have in the interval between the so-called ovarian points, the zones of hyperesthesia, the slight touching of which will bring on an attack, and a hemianesthesia of the sensory nervous system, are susceptible of being plunged into a forced sleep.

If one of these patients be directed to look fixedly at a point set before the eyes, as the end of a pencil, for example; in a few moments she inclines her head, closes her eyes, and a short respiration accompanied by a movement of deglutition announces that the patient is hypnotized. In this condition there is a condition of hyperexcitability of the muscles and nerves, in which, by slight pressure or friction of a muscle or nerve, contracture of the muscle or of the muscles supplied by the nerve can be produced. Furthermore the patient retains the power of speach, answering questions addressed to her, counting when directed so to do, or even reciting passages that may have been committed to memory. She can also calculate, as may be shown by directing her to perform some simple addition or subtraction mentally. She can also write her name or address or can write from dictation. Or finally she can indicate different feelings by gesticulation.

Now if a patient be in this condition of hypnotism, it is very easy to induce a state of catalepsy. This can be done by sim-

ply raising the eyelids and allowing the light to fall upon the retinæ, when very marked changes are observed in the condition of the patient. All the hyperexcitability of muscle and nerve disappears; but the limbs preserve the attitudes in which they are placed. But most important of all with reference to the matter which we are discussing, all evidence of thought is abolished. She cannot speak, either to answer questions or to repeat anything that may have been memorized, and she is incapable of writing or making gestures.

In *Le Progrès Médical* of Sept. 11th, 1880, we find an account of some further observations and experimets, first suggested in 1878, by Prof. R. Lepine, of Lyons, in the service of M Charcot and since then repeated or varied in different ways.

When a patient has been hypnotized, it is possible to excite the condition of catalepsy in one half the body by allowing the light to fall upon the retina of one eye; but it must be observed in these experiments that, on account of the intercrossing of the fibers of the optic nerve, the right eye corresponds to the left hemisphere and the left eye to the right hemisphere.

A patient is hypnotized; the respiratory sound, the characteristic movement of deglutition have announced that the sleep is real; the muscles and nerves are hyperexcitable and the analgesia is general. If we call on the patient to speak, to write, to make gestures, she obeys us. When we open the left eye, that is to say, throw the right hemisphere into a condition of catalepsy, no change appears in regard to the function of speech. The faculty of language remains intact.

But if we change the conditions and close the left eye which corresponds to the right hemisphere, while we open the right eye which corresponds to the left hemisphere, thus producing catalepsy of the left hemisphere, immediately all commumication with the outer world is suppressed. She no longer makes response to questions addressed to her; no longer writes either at dictation or when desired to write her name or address; no gesture or play of feature indicates the reception of any impression through the senses.

The experiment may be varied. Thus a hypnotized patient

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is directed to count, which she does automatically, commencing with the number one. If we open the left eye, corresponding to the right hemisphere, the patient is not interrupted; but when we open the right eye, corresponding to the left hemisphere, she pauses and then resumes her counting spontaneously, as soon as we reclose the lids, thus remanding the left hemisphere to the condition of hypnotism.

Again a patient who knew by heart some pieces of verse, was directed, when in the hypnotic state, to recite; and immediately began with distinctness and in a clear voice. When the left eye was opened the recital was undisturbed; but when the right eye was opened the patient stopped surprised in the middle of a verse or sometimes in the middle of a word, to resume the recitation when the lids were allowed to close.

The same effect may be produced when a patient in this state is directed to write her name or address or a phrase that has been dictated to her, and the writing will be arrested in the middle of a word or even in the middle of a letter.

This seems to us a very interesting demonstration *in vivo* of the facts already so well established of the localization of the faculty of language in the left side of the brain.

MEDICINAL ERUPTIONS.

Dr. Arthur Van Harlingen remarks in a recent paper,[1] that it has long been known that certain drugs, administered internally, may in particular individuals give rise to eruptions upon the skin, and in the case of some few drugs these eruptions are recognized, in some of their forms at least, by most practicing physicians. But it is not so generally known, he continues, nor has the fact been appreciated at all until within recent years, that a considerable number of drugs not previously suspected

1 *Archives of Dermatology*, October, 1880.

of possessing any such peculiarity, have the power to give rise to eruptions of various kinds, and occasionally of a severe and dangerous character. In the able and laborious monograph before us, the author has collected and collated all the more important among the recorded cases of drug eruption, arranging them first in the alphabetical order of the drugs involved, and then grouping under the head of each drug the various lesions of the skin which have been attributed to its influence. Where it has been possible, he has given the dose of the drug, the period of its administration, the entire amount ingested, and the lesions produced. The drugs whose toxic effects upon the skin have thus far been studied, are as follows: Arsenic, belladonna, bromine, cannabis indica, chloral, copaiba, opium, cubebs, digitalis, iodine, mercury, morphia, opium, phosphoric acid, quinine and cinchona, salicylic acid, santonine, strychnia, tar, carbolic acid, turpentine, resin, and petroleum. It is highly probable that future observations will greatly extend this list; indeed, there is no reason why it should not be co-extensive with the materia medica. While the ingestion of certain drugs, under peculiar and ill-understood conditions, is followed with tolerable regularity by certain cutaneous manifestations—for instance, the pustular eruption of iodine and bromine, the erythematous rash of belladonna, etc.—a careful reading of recorded cases shows the wide diversity of lesion, both as to character and gravity, which each is capable of provoking. Thus while the prevailing type of the quinine exanthem is erythematous, under other circumstances, and for some unknown reason, its internal exhibition may be followed by purpura or gangrene. Although one writer has advanced the idea that the purpura of iodide of potassium is most prone to occur in the subjects of cardiac disease, in looking over the whole field of inquiry, it does not appear that the previous health of the sufferer from these various drug eruptions, has played any part in their causation. Indeed, as regards the petechial iodide eruption, the patients whose cases are recorded by Fournier, all enjoyed average health. Neither does the dose employed seem to be a factor in their production; although,

perhaps, certain drugs produce their toxic effects only after prolonged administration, or following unusually massive doses. Still, to recur once more to the familiar iodide of potassium eruption, while it is known that the acneform lesion is apt to ensue upon the steady use of that drug, we have seen a purpura develop after the ingestion of six grains in divided doses. There is no question of the fact, however, that once an eruption has been produced, a further administration of the agent producing it, through ignorance of cause and effect, would undoubtedly intensify the existing disturbance, if it did not jeopardize the life of the patient. The bearing of drug eruptions upon accuracy of diagnosis is also a matter of great importance. A recent writer points out that many anomalous eruptions, e. g., pityriasis rubra, erysipelas, relapsing scarlatina, etc., find their explanation in the now well-known peculiar action of quinine upon the skin. And so in regard to other agents. We quite agree with Dr. Van Harlingen's observation that our knowledge is not sufficiently accurate to permit of any theory being brought forward which will satisfactorily explain these phenomena of erratic drug action. For the present we must fall back upon that convenient cloak for our ignorance termed personal idiosyncrasy.

TRAINING SCHOOLS FOR NURSES.

The training school for nurses in connection with Bellevue Hospital, has been in successful operation now, for over eight years, and similar schools have been organized in connection with the New York and Charity Hospitals and met with equal success. Bellevue graduated thirty at its last commencement, and the younger schools smaller classes.

The course of study occupies two years; instruction is given by lectures, demonstrations (anatomical and physiological) and recitations, an hour a day being devoted to the theoretical part of the course.

Applicants for admission must bring satisfactory testimonials as to moral character and physical ability and must pass an examination in reading, arithmetic and writing from dictation. They are then admitted on probation for one month. If they give satisfactory evidence of competency, they are then regularly enrolled as members of the school. The practical training commences at once upon their entrance. During the first six months, she is assigned to day duty in the wards, from 8 A. M. to 8 P. M., with an hour for dinner and another for exercise. Instruction is given in the dressing of wounds, application of poultices, cups, leeches, blisters; the use of the catheter, methods of friction and massage; the administration of enemata; dressing bed-sores; giving baths; bandaging; modes and means of ventilation and disinfection; and cooking of special diet and serving delicacies for the sick.

She is also taught to make and record accurate observations as to pulse, temperature and respiration, and as to the nature of the secretions as well as other phenomena of which the attending physician should be apprized. After the first six months the nurse may be assigned to night service in the wards, and required to make a record every two hours of the condition of such patients as may be seriously ill in the ward.

During the second year she serves as head nurse in the wards or may be sent out to nurse in private families. In the wards, the nurses are from time to time transferred from one to another, so that during their course they have an opportunity of observing and nursing all classes of cases, medical, surgical, obstetrical and uterine.

The nurses receive their board and lodging in the school, and in addition, are paid during the first year $9.00 per month, and during the second year $15.00 per month. All other compensation received by them for service is to be paid into the treasury of the Society. The regular charge in New York for a nurse furnished by the school is $16.00 per week, or $3.00 per day.

Graduates of these schools are in constant demand as nurses, and to take charge of hospitals and other charitable institu-

tions, and the success of the system seems to be fully assured. Similar organizations have been effected in some of the other eastern cities; and within a few months the "Illinois Training School for Nurses," has been established in Chicago. The organization comprises a board of managers, ladies; an advisory board consisting of several of the county commissioners, prominent physicians and influential citizens. The course of instruction will be similar to that adopted in the eastern schools.

COMMUNICATIONS.

EDITORS AND RE-EDITIONS.

Messrs. Editors:—One of the most serious questions pressed upon the profession is that which concerns the continual afflux of medical literature: Shall we or shall we not purchase the new works upon special and general medicine that the publishers continually place before us. Of the making of books there is no end! To purchase all is an impossibility; the practitioner can not hope to possess himself of all the new works treating of general medicine even, so numerous are the issues. When we approach the special departments, the leaves are as thick as those that strew the brooks in Vallambrosa; we gaze astonished upon the descending shower.

Is there just cause for this fecundity of the medical press? Do all these publications represent valuable matter? We cannot be guided altogether in our selections by the criticisms or rather eulogies so common in the journalistic columns. The most worthless printed pages receive fair praise from very eminent sources. This is a great misfortune, since it deprives the subscriber of his rightful assistance in buying new books. There may be found in a weekly of no less standing than the *London Lancet*, unreserved praise of books that are actually not worth the paper consumed. This is a great wrong and a custom utterly

unworthy that distinguished publication, which, assuredly, is above the necessity of allowing convenience rather than plain duty to rule its course. One result is certain, notices of books by such careless editors must degenerate into mere advertising puffs, and be so regarded by the profession. Our critics, then failing us, and the flood not being regulated by this natural and needful control, what is to be done? How is the seeker after information to protect himself or be protected? Time and money are both sorely taxed, commodities not over abundant in the profession.

This past summer a veteran librarian, the guardian of one of the best known public medical libraries in the eastern states, in a conversation with me upon the subject, fairly groaned over the continued and exhaustive depletion of his treasury that crowded his already well filled shelves with material that could be better spared than stored. Of course in this case mere trash was excluded, and no cunning puff could waft it into honorable position amidst that gathering of notables; but the *re-editions!* Now, the definition of dirt is matter out of place: The matter of itself may be most excellent, wholesome and desirable, but out of its proper place it becomes at once obnoxious and is unconditionally classed with rubbish.

Our librarian pointed out a well-known fact that many of these so-called re-editions are no re-editions in the real sense of the term; they are a rehash of old material with perhaps a few lines or pages of new: the result not justifying a tax of several dollars upon the zealous student who purchases the disappointing copy in expectation of being rewarded for his expenditure and careful examination. An author may feel acutely his responsibility towards his readers and determine to give in his re-edition a new and valuable work, a natural and fortunate product of evolution out of the old form that the advance of science has abrogated; but even under the happiest of auspices is re-edition of several hundred pages altogether justified? Perhaps, in rare cases. It is obvious enough that in these days of wonderful mental activity when science is pressing forward over every obstacle, resolved to leave no question unattacked, and the day is filled with the voice of discovery, that suitable record should be kept; the periodical snatches up the chance treasures as they are found, and gives them a transitory view;

but it is necessary that they should be more fitly placed and arranged in an orderly and permanent exposition, this office the re-edition is supposed to assume.

There is a plan by which authors of standard works may retain their public, and, while publishing connectedly all the latest scientific results, save their readers much money and expenditure of time in the often vexatious labor of searching through a new book to note wherein it differs from its predecessor. An author who has written a book of such value as to have gained through it the attention and respect of the Profession, should *supplement* it from time to time as increased knowledge may require, not with a bulky re-edition to patch up our old friend, but with a smaller issue containing only the new matter and references to indicate the views or chapters that are to be modified. To be sure such supplements can not be sold at the same price as more voluminous works, but none will dispute the fact that thus they would be worth more to the poorly paid practitioner or over-strained reader. Besides, the author by issue of such supplement will *hold the field better;* he is already an acknowledge authority and by his enterprise and watchfulness can maintain his enviable position, excluding would-be competitors who seek to launch their ventures upon the tidal wave of accumulated scientific discovery. However, it is very probable that in the end the author will receive more money through his supplements than through the less frequent and less attractive re-edition. At rare and long intervals when the subject has come to require a complete revision, then the new edition is self born and not the result of abortion, distorted, misshapen, and altogether undesirable. I am sure, Messrs. Editors, that the great mass of the Profession will coincide with the views here expressed, and I may add that one eminent author has been pleased to regard this plan favorably.

Yours Respectfully,

C. A. T.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Messrs Editors : The recent meeting of the American Public Health Association, at New Orleans, was without doubt the most important one since its formation. Not only was the attendance larger than at any previous meeting, and its influence for good proportionately augmented, and its prosperous financial basis more certainly assured, but above and beyond all these, it is hoped and believed that the body exercised upon the place of meeting an influence for local good, that peradventure, shall not fail of fruition in the quite near future. Certainly New Orleans, with its unique and not unfrequently un-American ways, modes of drainage, burial, etc., was a revelation of insanitation to many delegates who then viewed the city for the first time. Assuredly no place more needed the stimulus of such a meeting and occasion, to strengthen the hands of those who are striving so courageously, often it is feared in the face of discouraging opposition, to redeem it from the recurring ills that have plagued its health and prosperity so sorely in recent years.

The first day's session, Dec. 7th, was devoted to a paper on "Abattoirs," by Dr. G. Devron, of New Orleans; to one on "How Abattoirs Improve the Sanitary Condition of Cities," by Dr. Bushrod W. James, of Philadelphia, and one on "Texas Cattle Fever," by Joseph R. Smith, M. D., of the regular army. The report of the committee appointed last year to mature a plan looking to the prevention of the spread of venereal diseases, was also read. The committee, composed of Dr. A. L. Gihon, Medical Director U. S. Navy, and Dr. J. M. Keller, recommend that cognizance of the subject be taken by State legislatures, and the enactment of a law constituting it a criminal offense to knowingly communicate, directly or indirectly, contagious diseases, as small-pox, scarlet fever, or venereal diseases; and a resolution to that effect was adopted by the Association. A paper "On the Storm Water Question in Relation to Sewerage," by Col. Geo. E. Waring, was read, in which that interesting subject was clearly discussed and its grave disadvantages, from the author's standpoint, fully set forth.

The address of the President, Dr. J. S. Billings, was delivered in the evening, following the formal expressions of welcome by the Governor, Mayor and the representative of the State Medical Society. The address was apt and to the point, a model in its way. The impressive truth was emphasized, that in sanitary affairs, at least, "curses causeless shall not come"—that the relation of cause and effect, sowing and reaping, holds good and is as inexorable in public health matters as in any other affair involving the actions and concerns of human life.

Space does not suffice to note the many valuable papers presented and the interesting discussion had during the ensuing three days of the session.

The election held for officers to serve for the ensuing year, resulted in the choice of Dr. C. B. White, of New Orleans; for President; Dr. R. C. Kedzie, of Michigan, for First Vice-President; Dr. H. F. Campbell, of Georgia, for Second Vice-President; Dr. Azel Ames, Jr., of Massachusetts, for Secretary, and of Dr. J. Berrien Lindsley, of Tennessee, for Treasurer.

Too much cannot be said in appreciation and acknowledgement of the hospitality, courtesy, and unremitting desire to please shown to delegates by the people of New Orleans, and particularly by the gentlemen having charge of the local concerns of the Association, to whose earnest efforts the gratifying outcome is largely due. H.

St. Louis, Dec. 28th, 1880.

LOCAL TREATMENT OF PARAPHIMOSIS.

Messrs. Editors:—I had under my care a case of chancroids—chancroidal bubo complicated with paraphimosis. The paraphimosis had existed eight weeks, but did not become strangulated at any time; it could not, however, be reduced, and I thought that the prepuce would never come forward. After trying various expedients, I at last thought of the rubber bandage. I applied one firmly for three days, and was agreeably surprised one morning to find the prepuce forward and penis again in a normal condition. The rubber used was of the thickness of Martin's bandage, one inch wide and about four feet long.

EUGENE F. HAUCK, M. D.

City Hospital, St. Louis, Dec. 4th, 1880.

LOCAL MEDICAL ORGANIZATIONS FOR MISSOURI.

CIRCULAR LETTER TO THE PROFESSION AT LARGE THROUGHOUT THE STATE, FROM A SPECIAL COMMITTEE APPOINTED BY THE MISSOURI MEDICAL ASSOCIATION AT ITS LAST ANNUAL MEETING.

The committee on State Medical Organizations, of which Dr. T. J. Norris is Chairman, in the prosecution of the work of organizing District Associations, and urging upon physicians the absolute necessity of organizing County Societies, is directed to move as speedily as possible in this matter, and to urge particularly the importance of making all organizations conform in all respects to the Code of Ethics and to the Constitution and By-Laws, and all resolutions in regard to organization, adopted by the State Association.

All associations, or societies, district or county, that may hereafter be organized, are directed to report to Dr. T. J. Norris, Macon, Mo.

J. M. ALLEN, M. D.,
President State Medical Association.

In compliance with the above directions, the committee would urge upon the physicians of the State the necessity of organizing at once county societies, as it is alone through these local organizations that an effective State organization can be obtained.

The medical profession of our sister States are, with success which is truly encouraging, urging upon the State authorities of their respective States the appointment of a State board of health, and this is certainly a move in the right direction.

If the physicians of Missouri desire to assist in bringing about this much needed reform, they can make themselves heard alone through medical organizations. A little earnest, well directed work will accomplish more in a few months for the elevation of the profession in our State, than can be accomplished in years without an effective organization.

Our Legislature very properly expects all medical reforms to be brought to their notice by the medical profession; and having confidence in our patriotism and philanthropy, will, we

have every reason to believe, favor any plans which may be presented to them by the united representative medical practitioners of the State for the elevation of the profession of medicine, and through it to the security and physical comfort of the people.

By a complete organization, every individual physician in the State will be benefited, as it is through local organizations that accurate medical statistics can be obtained, as well as much valuable medical information of all kinds.

The physicians of each county in the State that has no regularly organized county society, are requested to meet at as early a day as possible, and organize, and report the same as directed by the President, and send delegates to the district associations to which their counties belong. And through these district associations they should be represented in the State Association.

Where there are a sufficient number of counties that have organized county societies, and where there is no district organization, they should proceed at once to organize, and they should not neglect to send delegates to the next meeting of the State Medical Association.

T. J. Norris, M. D., Chairman; R. S. Brooks, M. D.; T. Brown, M. D.; J. W. Cannon, M. D.; C. C. Clements, M. D.; W. G. Drake, M. D.; M. W. Flournoy M. D.; E. P. Hansard, M. D.; T. J. Hubbert, M. D.; R. H. Huelet, M. D.; C. D. Latimer, M. D.; A. Maas, M. D.; A. M. Mitchell, M. D.; W. C. Overstreet, Jun., M. D.; S. C. Price, M. D.; W. J. Rutledge, M. D.; J. A. Webster, M. D.; L. M. Wright, M. D.

ARTIFICIAL INFLATION OF LUNGS.

Messrs. Editors:—Any of your readers who may desire to practice artificial inflation of the lungs, as detailed in my paper on that subject, read before the American Medical Association and afterwards printed in your journal, can procure an excellent instrument for that purpose from Codman & Shurtleff, 13 & 15 Tremont Street, Boston, Mass, for four dollars, with a discount to wholesale dealers. It was made after a model sent by me, and will be found to answer the purpose very well. It has a large air bulb which will contain, when extended, about fifty cubic inches of compressed air, and a faucet in the mouth tube to control its escape. It is durable, and can be carried in the pocket.

W. Y. GADBERRY, *Yazoo City, Miss.*

BOOK REVIEWS AND NOTICES.

DISEASES OF THE THROAT AND NOSE, INCLUDING THE PHARYNX, LARYNX, TRACHEA, ŒSOPHAGUS, NASAL CAVITIES, AND NECK. BY MORELL MACKENZIE, M. D., London.

VOLUME I. DISEASES OF THE PHARYNX, LARYNX, AND TRACHEA. *Philadelphia: Presley Blakiston.* 1880. 8vo., pp. 570; cloth, $4.00. (Through the Hugh R. Hildreth Printing Co.)

DISEASES OF THE PHARYNX, LARYNX AND TRACHEA. By MORELL MACKENZIE, London. *New York: Wm. Wood & Co.* 1880. 8vo., pp. 440; cloth. (Wood's Library of Standard Medical Authors.) (Through C. C. Pease, 514 Olive St.)

The subject of laryngoscopy is one that is only commencing to have in America the attention it demands; it demands the attention of the profession, inasmuch as it is a branch of medicine far advanced both in theory and practice; in addition, the anatomical region with which it is concerned is one of the greatest interest both as containing the organ of voice, and as being the gateway of the respiration. Dr. M. Mackenzie being the acknowledged authority of Great Britain in laryngoscopy, the medical public has anticipated with much pleasure the appearance of his collected writings in the form of a standard work. "Diseases of the Throat and Nose" is presented in two volumes, the first being devoted to the larynx and its associate region, the trachea and pharynx; the second volume (not yet issued) will treat of the nasal passages, œsophagus, and neck; the whole work if completed in the same comprehensive and thorough style that characterizes the first volume, will form an addition to medical literature of most solid and enduring value.

The plan of the book is eminently satisfactory. The anatomy of each region is given, not in a feeble sketch, but exhaustively; the modes of exploration of these remote cavities are clearly explained, and so are the various instruments required in examination and operation; excellent illustrations aid the text in these particulars.

The catalogue of the local diseases is next taken up; the synonyms are given and the corresponding names in the Latin, French, German and Italian; a clear definition follows, then the etiology, symptoms, diagnosis, pathology, prognosis, treatment. Pathological conditions, especially those of the larynx, are abundantly represented, the cuts are sharply defined and are forcibly illustrative.

An appendix is given containing special formulæ for topical remedies, inhalations, vapors, sprays, gargles, lozenges, pigments (applications with the brush) insufflations.

Under the head of Chronic Pharyngitis, characterized by relaxed pharyngeal mucous membrane and uvula, it is pointed out that the worst cases "generally arise from the abuse of the stronger forms of alcohol," a sub-acute catarrh of the stomach being excited which involves the pharynx through the esophagus. It may be added that frequent beer drinking as well as over indulgence in tobacco, will induce the same condition. The pathology of granular pharyngitis is stated as being as yet not settled; two forms are accepted, one of hypertrophy of the epithelium about the follicles, in the other the follicles themselves appear to be the seat of disease, and contain a morbid secretion that does not freely exude but clings to their orifices.

In *Virchow's Archives*, October 7th, 1880, p. 147, Dr. Martin Saalfeld gives a series of plates to demonstrate that the granulations are due to the presence of lymphoid cells heaped together under the epithelium proper and about the enlarged ducts of the follicles, which view appears to be more in accordance with analogy.

Rheumatic Sore Throat, page 61. Practitioners need to bear in mind that marked sore throat is sometimes the first symptom of a rheumatic attack. [Severe otalgia as well as subacute otitis may also be an expression of rheumatic poison; these facts are easily overlooked.]

An inconvenient result of hasty eating, "bolting," is described, page 91, as this habit, "is likely to disturb and vitiate the functions of the muscles of the pharynx and esophagus, I have ascertained that there was carelessness and hurry in eating in several of the pharyngeal dilatations that have come under my notice." On the authority of an Italian surgeon

Borelli, the practice of tearing out with the finger hypertrophied tonsils, is praised as efficient and easy of execution.

The differentiation of phthisical and syphilitic ulceration of the pharynx is carefully dwelt upon under those headings. Most practitioners probably have had cases of pharyngeal ulceration that were in the highest degree perplexing. If the lesions which are giving rise to dysphagia even to the extent of prohibiting altogether the taking of food, while at the same time threatening the destruction of the palate, are syphilitic in nature, then the most energetic anti-syphilitic treatment is called for, but this will prove detrimental in the extreme if the ulcers are those of phthisis alone. "Objectively, the appearances presented by tubercular lesions of the pharynx are highly characteristic. The ulcers generally begin on the lateral wall of the pharynx, and spread thence to the roof of the mouth, and the posterior walls, as well as the velum palati. They are of lenticular shape, and according to O. Weber, bear a great resemblance to the corresponding intestinal affection;" page 109. "In pharyngeal phthisis the ulcers are very small, the dysphagia is much greater, and there is generally a very high evening temperature, which is altogether absent in syphilis;" page 106. "In the neighborhood of the phthisical ulcers, gray nodules of the size of millet seeds often spring up, and ultimately break down so as to form fresh ulcerations." It is to be remembered, however, that the two diseases may co-exist.

The subject of diphtheria is exhaustively considered, sixty-one pages being devoted to it, membranous croup under the designation of laryngo-tracheal diphtheria being included. The author is most positive about the identity of diphtheria and membranous croup. His views may be summed up as follows: There is no pathological difference in the exudation, the distinction of greater or less adhesion of the false membrane being due to the difference in structure of the pharyngeal and laryngeal mucous membrane, in the latter the homogeneous basement membrane being more distinct, the exudation upon the surface is hindered from penetrating as deeply as it does in the pharynx where that structure is not so definite. Under the microscope the structure is stated to be much alike. (Dr. E. Wagner.) Clinically there is no essential difference,

only in about 10 or 12 per cent. does the membrane appear first in the larynx and trachea; it commonly commences in the pharynx; the general symptoms in croup are less severe since the larynx is not so intimately connected with the system through numerous lymphatic are as the pharynx and palate, when, however, the primary poisoning is powerful, the constitutional symptom in the so-called croup are as marked as in diphtheria; albuminuria is often present in croup; paralysis is occasionally met with after recovery from croup.

Herpes of the pharynx, in the ulcerative stage may be confounded with diphtheria; presence of individual ulcers, such as are left after rupture of a vesicle, herpetic eruptions elsewhere, these will assist in the diagnosis. Sometimes no certain diagnosis can be made on the first inspection. The exudation from the follicles from an inflamed tonsil simulates the diphtheritic membrane, but may be recognized by the readiness with which it can be wiped off, as well as by its site about the mouth of the follicles; here also diagnosis is not always absolutely certain.

Mackenzie speaks doubtingly of sore throat dependent upon malaria. There can be no doubt but that it does occur; certainly, physicians in St. Louis have frequent occasion to observe the fact, and to note the readiness with which the disease yields to quinine.

The treatment of acute laryngitis, p. 200, with arg. nit., is rejected upon personal experience, although the recommendations of others are given; the author's position should be well noted; after my own experience, I would not venture to use so irritating a drug in acute laryngitis.

Edema of the larynx, when originating primarily in the larynx, Mackenzie believes to be due to blood poisoning, and hence very fatal even where tracheotomy has been performed in time to relieve respiration. This form is rare, edema generally being consecutive upon pharyngeal diseases.

With the section upon laryngeal growths and their treatment, the profession is already familiar through Mackenzie's book upon the subject, published some time since. Special force is given the dictum, well stated to be a *cardinal law*, that "an extra-laryngeal method (in removal of laryngeal growths) ought *never* to be adopted unless there is danger to life through

suffocation or dysphasia." Direct incision into any part of the air passages is always attended with danger to life.

In describing the instruments to be used for removal of laryngeal growths by the mouth, Mackenzie does injustice to the Vienna school. The clumsy instrument represented, p. 262, as Prof. Von Schroetter's laryngeal forceps, certainly is not the one relied upon in his clinic for general operation. In defense of this genial and successful teacher, a brief statement of the Schroetter instrument, as put into the hands of his pupils, will be both interesting and of value. The handle is fashioned after the pistol stock, so that it may be held with the utmost firmness (it is well to have the handle made by the manufacturer *to fit* the surgeon's hand). The movements of the forceps, which are screwed on the end of a steel wire running through a tube that is fitted into the handle, are effected by a roughened metal slide placed conveniently for the tip of the fore finger; this slide grips the forceps wire by a thumb screw. This handle in the main was the invention of Tuerck of Vienna, who claims with justice the honor of being the father of laryngeal surgery, and the founder of the Vienna school of laryngoscopy. Since operations within the larynx demand the utmost certainty and delicacy of manipulation, the advantages of this pistol grip handle, with the slide, which keeps the movements of the finger *in the axis* of the hand, are sufficiently apparent. The handle is set at such an angle with the tube that enters the larynx, that the forceps can be readily followed by the eye, the hand being kept out of the line of vision. This device also is Tuerck's (Diseases of the Larynx, Dr. Ludwig Tuerck. Vienna, 1866, p. 567). The forceps used by Schroetter in his instrument are about the same as those used by Mackenzie. The tube through which the steel wire passes is of German silver, and *can be bent* at convenient angles. This is an enormous advantage in operating; of course the steel wire does not interfere with this bending, nor does it require to be changed; the bending is effected at once to meet the momentary exigency. Differently shaped forceps can be screwed upon the wire in a moment's time. In laryngeal operation, all must pass off expeditiously and certainly.

The much discussed question, whether the larynx can be the primary seat of phthisis, is decided in the negative, p. 266. The

appearance of the ary-epiglottic fold is often pathognomonic of tuberculous disease, one or both presenting a pyriform swelling of a pale color. The great value of morphia by insufflation, in affording relief in laryngeal phthisis, is insisted upon; $\frac{1}{8}$ grain diluted with powdered starch, may be thus applied twice daily when the cough becomes very troublesome, p. 279. This morphia treatment is of greatest advantage, however, in the ulcerative stage, when the larynx has become so sensitive that the efforts of swallowing, together with the pressure of the bolus, becomes intolerable, and consequently death from starvation imminent; in such cases this drug is our only reliance, and it is well not to impair its efficiency by too free use in the less urgent stages of the disease. This caution the author has omitted.

Since paralysis of the larynx must necessarily affect the respiration or voice, or both, the number of pages occupied with that subject will not appear too many. The various paralyses are systematized, and the etiology carefully discussed. Lesion of the medulla, spinal accessory, pneumogastric trunk, superior and inferior laryngeal, explains laryngeal paralyses. A diagram is given, p. 431, to illustrate the thorax, relations of the recurrent nerves, and their liability to become involved secondarily in the diseases there obtaining; the left passing around the aorta deep within the chest, is especially exposed to pressure from aneurism, enlarged bronchial glands, etc.; the right nerve coming in close proximity with the apex of the right lung, may be compressed by thickening of the tissues in this region. Enlarged cervical glands may compress the recurrent or pneumogastric trunk. Paralysis of individual muscles sometimes appears to arise from changes in the muscles independent of nerve lesion, the abductors being most liable to be thus affected, as they are most exposed to injury by reason of their position upon the posterior surface of the larynx. As paralysis of the abductors might be mistaken for spasm of the glottis, the differential diagnosis is pointed out. In the paralytic cases there is a constant but partial closure of the glottis, while in the spasm there is inconstant but complete closure. In the first condition we have constant dyspnea, in the other occasional, though this is not an absolute law.

This same work is published by Presley Blakiston, and

by Wm. Wood and Company. The former edition is printed in handsome style on tinted paper, with large type, and is a book which, with Dr. Mackenzie's other volumes that are to follow from the same press, will be an ornament to any library.

The other edition, from the press of Wm. Wood and Company, is uniform in style with the other volumes of the Wood's Library of Standard Medical Authors for 1880. C. A. T.

THE BRAIN AS AN ORGAN OF MIND. By H. CHARLTON BASTIAN, M. A., M. D., F. R. S., Professor of Clinical Medicine in University College, London *New York: D. Appleton & Co.* 1880. 12mo., pp. 708. Cloth.

The work before us is certainly a most thorough investigation of all the known facts bearing on the relation of mind to matter. Its arrangement is systematic, beginning with the simple and gradually ascending to the complex, thus imitating nature. The opening chapter is on the origin and use of a nervous system, beginning with the lowest known forms of nervous apparatus, and tracing it up through the various grades, the mollusks, vermes, anthropods, invertebrates, fishes, and amphibia, reptiles and birds, giving the minute structural formations of nervous apparatus with their powers and capacities, in all of which most scientists would agree with the author.

Chapter X., on "Scope of Mind." The author reviews the past and present of many distinguished metaphysicians and scientists, who either consider the mind as an entity, residing somewhere, or some place, between the heavens and the earth, occupying neither time nor space, yet always in reach, when it wishes to play on or through the brain, as a musician would a musical instrument; or, those who have no definite opinion on the subject, and deal only in mysticisms. This is done carefully and logically, and with a fairness that is admirable, and to our mind refutes the idea of the distinct entity of mind. The author here definitely defines his view, which in substance is this: that mind is one of the results of molecular activity of nerve cells. The word organ is used merely in the sense that it is a part whose molecular changes and activities constitute the essential correlatives of those phases of consciousness known as sensation, emotion, thoughts and volitions, as well as of a considerable part of the sum total of those other related nerve actions which are unattended by consciousness, and

whose results form, in accordance with the views above stated, so large a proportion of the phenomena comprehended under the general abstract word, mind. In the investigation of mental phenomena, the author recommends the subject to be approached from different directions on different subjects.

In addition to the subjects previously mentioned, we have Chapter XI., Reflex Action and Unconscious Cognition; Chapter XII., Sensation, Ideation and Perception; Chapter XIII., Consciousness in Lower Animals; Chapter XIV., Instinct—Its Nature and Origin; Chapter XV., Nascent Reason, Emotion, Imagination and Volition; Chapter XVI., The Brain of Quadrupeds and Some Other Mammals; Chapter XVII., The Brain of Quadrumana; Chapter XVIII., Mental Capacities and Powers of Higher Brutes; Chapter XIX., The Development of the Human Brain During Uterine Life; Chapter XX., The Size and Weight of the Human Brain; Chapter XXI., The External Configuration of the Human Brain; Chapter XXII., From Brute to Human Intelligence; Chapter XXIII., External Structures of the Human Brain; Chapter XXIV., The Functional Relations of the Principal Parts of the Human Brain; Chapter XXV., Phrenology—Old and New; Chapter XXVI., Will and Voluntary Movements; Chapter XXVII; Cerebral Mental Substrata; Chapter XXVIII., Speaking, Reading and Writing, as Mental and Physiological Processes; Chapter XXIX., Cerebral Relations of Speech and Thought; Chapter XXX., Further Problems in Regard to the Localization of Higher Cerebral Functions.

The book concludes with an appendix on the "Nature of Muscular Senses." We merely mention the subject matter of each chapter, that the reader may have an idea of the thoroughness of the author's investigations in all the fields of scientific knowledge, bearing on either of the three principal modes of approaching the interesting question of mental phenomena—Subjective Psychology, Objective Psychology, and Neurology. Each chapter is fully abreast of all that is known on the subject, with many valuable deductions that are logical and new, given in a clear, concise and positive manner, free from dogmatism. The object of the author, from the beginning to the end of the book, seems to be to refute error with truth, in which, in our opinion, he has succeeded most admirably and overwhelmingly.

We venture the opinion that he has forever taken the study of mental phenomena from that class of philosophers termed metaphysicians, who have so long retarded progress in this direction, and placed it in the hands of those who study mind as a phenomena of nature, especially physiologists. No reviewer of this book can convey an adequate idea of its scope of research, or the value of its information. Space forbids. It must be read and studied to be appreciated. And we commend it to all lovers of scientific research and truth, and especially to physicians, who have to deal so much with the influence of mind over functions, as well as its manifestations from diseased structure.

J. M. A.

INVALID COOKERY; a manual of Recipes for the Preparation of Food for the Sick and Convalescent, by MRS. ELIZA A. PITKIN, also a chapter on Nutritive Enemata and practical suggestions for the sick-room, by MRS JULIA A. PYE. pp. 127. *Chicago: Jansen, McClurg & Co.* [From the Authors.]

This unpretentious little book is one that should find its way into every household. The ingenuity of the physician and nurse is often taxed to discover some new and palatable method for the preparation of nutriment so essential to the proper management of prolonged maladies. These ladies have from this very necessity become adepts in the *cuisine des malades*, and only publish such recipes as practical experience has proven to be good. The methods of preparation are in every instance given with such concise and careful detail that mistakes are impossible, and the varieties of dishes made from the simplest components, secures the patient against that weariness of monotonous diet that so often annoys and combats the attendants, *e. g.* There are fourteen varieties of beef and mutton teas or essences.

While the book is intended for the kitchen, it will not come amiss in the doctor's Libray, as an appendix to the works of science upon Dietetics, and we cordially commend it to the profession, as fulfilling a most useful and heretofore much neglected requirement.

G. A. M.

BOOKS AND PAMPHHETS RECEIVED.

SEVERE CASES OF RETROFLEXION OF THE UTERUS, WITH PERITONEAL ADHESIONS OF THE FUNDUS IN THE HOLLOW OF THE SACRUM. Treated by forcible separation of the adhesions. By Aug. F. Erich, M. D., etc. [Reprint from the *American Journal of Obstetrics*, October, 1880.]

A DEVICE TO FACILITATE THE REMOVAL OF DEEP WIRE SUTURES IN THE OPERATION FOR RUPTURED PERINEUM. By Aug. F. Erich, M. D., etc. *Baltimore, Md.: J. W. Borst & Co.*

A TEXT-BOOK OF PHYSIOLOGICAL CHEMISTRY OF THE ANIMAL BODY, including an account of the Chemical Changes occurring in Disease. By Arthur Gamgee, M. D., F. R. S., etc. With Illustrations. Vol. I. *London: McMillan & Co.* 1880. 8vo., pp. 487; cloth, $4.50.

HIGHER EDUCATION OF MEDICAL MEN, AND ITS INFLUENCE ON THE PROFESSION AND THE PUBLIC. Address before the American Academy of Medicine at its fifth annual meeting, Providence, Rhode Island, Sept. 28, 1880. By F. A. Lente, M. D., President of the Academy. *New York: C. L. Bermingham.* 1880.

GASTROTOMY OR GASTROSTOMY. By L. L. Staton, M. D., Tarborough. [Reprint from *N. C. Medical Journal*, October, 1880.]

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. Gaillard Thomas, M. D., etc. Fifth edition. Enlarged and thoroughly revised, containing two hundred and sixty-six engravings on wood. *Philadelphia: Henry C. Lea's Son & Co.* 1880. 8vo., pp. 806; cloth, $5; sheep, $6; half Russia, $6.50. (Through Hugh R. Hildreth Printing Co.)

PHOTOGRAPHIC ILLUSTRATIONS OF CUTANEOUS SYPHILIS. By. Geo. Henry Fox, A. M., M. D., etc. Forty-eight plates from life, colored by hand. Nos. I., II. and III. *New York: E. B. Treat.*

FOOD FOR THE INVALID; THE CONVALESCENT; THE DYSPEPTIC AND THE GOUTY. By J. Milner Fothergill, M. D., and Horatio C. Wood. *New York: MacMillan & Co.* 1880. 12mo., pp. 157; cloth, $1. (Through St. Louis Book & News Co.)

A TREATISE ON DIPHTHERIA. By A. Jacobi, M. D. *New York: Wm. Wood & Co.* 1880. 8vo., pp. 252; cloth, $—

DIAGNOSIS AND TREATMENT OF EAR DISEASES. By Albert H. Buck, M. D. *New York: Wm. Wood & Co.* 8vo., pp. 411; cloth. (Wood's Library of Standard Medical Authors.)

A PRACTICAL TREATISE ON SURGICAL DIAGNOSIS. Designed as a Manual for Practitioners and Students. By Ambrose L. Ranney, A. M., M. D. Second edition, enlarged and revised. *New York: Wm. Wood & Co.* 1880. 8vo. pp. 471; cloth, $—

OPHTHALMIC AND OTIC MEMORANDA. By D. B. St. John Roosa, M. D., and Edward L. Ely, M. D. Revised edition. *Wm. Wood & Co.* 1880. 32mo., pp. 298; cloth, $1.

CUTANEOUS AND VENEREAL MEMORANDA. By Geo. Henry Fox, A. M., M. D., etc., and Henry C. Piffard, M. D. *New York: Wm. Wood & Co.* 1880. 32mo., pp. 300. Cloth, $1.

(All Wm. Wood & Co.'s publications through C. C. Pease, Gen'l Agt., 514 Olive St., St. Louis.)

YELLOW FEVER. Its Ship Origin and Prevention. By Robert B. S. Hargis, M. D., Pensacola, Florida. *Philadelphia: D. G. Brinton.* 8vo., pp. 80; cloth, $1.

A MANUAL OF MEDICAL JURISPRUDENCE. By Alfred Swayne Taylor, M.D., F. R. S., etc. Eighth American from the tenth English edition. Containing the author's latest notes, made expressly for this edition, with additional notes and references by Jno. J. Reese, M. D., etc. With illustrations on wood. *Philadelphia: Henry C. Lea's Son & Co.* 1880. 8vo., pp. 933; half Russia.

SURGICAL TREATMENT OF CANCER OF THE RECTUM. By Chas. B. Kelsey, M. D., etc. [Reprint from *American Journal of Medical Sciences.*]

EXCISION OF CANCER OF THE RECTUM. An analyses of one hundred and forty cases. By Chas. H. Kelsey, M. D. [Reprint from *New York Medical Journal.*

HOW TO USE THE FORCEPS, with an Introductory Account of the Female Pelvis, and of the Mechanism of Delivery. By Henry G. Landis, A. M., M. D. Illustrated. *New York: E. B. Treat.* 1880. 12mo., pp. 168; cloth, $1.50.

ON THE USE OF THE COLD PACK FOLLOWED BY MASSAGE IN THE TREATMENT OF ANÆMIA. By Mary Putnam Jacobi, M. D., and Victoria A. White, M. D. *New York: G. P. Puntam's Sons & Co.* 1880. 8vo., pp. 76; cloth, $1.25.

NINETY-EIGHTH ANNUAL CATALOGUE of the Medical School (Boston) of Harvard University. 1880–81.

INAUGURAL ADDRESS delivered in the Mater Misericordia Hospital on the opening of the Annual Session, November, 1880. By Thos. More Madden, M. M., M. R. I. A. *Dublin: John Falconer.* 1880. 8vo., pp 16.; paper.

WALSH'S RETROSPECT.—The first number of the second volume of this journal comes to hand in an intirely new dress, new title page, tinted paper and new type. It is really one of the handsomest journals that has been laid on our table. A department for brief original articles, has also become a feature of the Retrospect.

REPORTS ON PROGRESS.

Pellets for Hypodermic Medication.—DR. L. WOLFF says that these pellets can be made by any pharmacist who has a suitable pill press. He uses hydrochlorate of morphia with an equal weight of chloride sodium, which renders the pellet more soluble than would be the pure morphia salt. They should not be compressed too strongly, else they will dissolve too slowly. When used they should be moistened with a drop of water from the filled syringe, then broken up, the balance of the water added, and solution effected by drawing it into and forcing it out of the syringe two or three times.

The advantages claimed are: 1, small space occupied; 2, ease of dispensing and carrying; 3, accuracy; 4, permanency. —*American Journal of Pharmacy*, December, 1880.

Ergot in Diabetes Mellitus.—HUNT reports a case which was discharged cured after three months' treatment. As much as one ounce of the ergot was given in the twenty-four hours, without injury, though the dose ordinarily was a drachm and a half per diem. In another case the effect was most satisfactory, though the sugar did not disappear rapidly from the urine. Sugar-producing substances were excluded from the diet, while meat and milk were allowed in abundance.—*Practitioner*, Sept., 1880.

An Improved Formula for the Administration of Phosphoric Acid.—PROF. PEPPER, who has used phosphoric acid extensively, states that Horsford's Acid Phosphate contains too much acid in the dose recommended by the makers, with too small a percentage of salts. He recommends the preparations made according to his formula, by H. C. Blair's Sons, of Philadelphia, of which No. 1 contains iron, while No. 2 contains none. They are termed liquor acid phosphor. comp. and liquor acid phosphor. respectively.—*Philadelphia Medical Times*, Aug. 14, 1880.

Castor Oil by Inunction.—MCNICOLLS relates the case of a child, five years of age, in whom the effect of castor oil was obtained by rubbing in one-third of an ounce into the skin of the abdomen.—*British Medical Journal*, Oct. 16, 1880.

Nitro-Glycerine in Sea-Sickness.—MR. TURNBULL has used this remedy successfully in several cases. It was given in lozenges, one dose being all that was required to effect a speedy cure.—*British Medical Journal*, Sept. 25, 1880.

Fluid Extracts of Digitalis and Colchicum.—DR. SQUIBB, in a private letter, states that the officinal fluid extracts of these drugs are more eligible preparations than the tinctures. They are eight times as strong, and cost only half as much.—*Ohio Medical Record*, August, 1880.

Epistaxis in Cirrhosis of the Liver.—VERNEUIL reports a case of epistaxis which could not be arrested permanently by the usual means, though faithfully employed. Ergotine had no effect, while digitalis arrested the flow for two days. Discovering a cirrhotic liver, the attending physician, Dr. Garnier, applied a large fly-blister to the hepatic region, after which the epistaxis did not return.—*Lyon Med.*, Sept. 26.

Chlorate of Potash in the Hemorrhagic Diathesis.—HEKIN recommends the administration of chlorate of potash in cases of hemorrhagic diathesis. He prescribes one ounce of the salt dissolved in twenty ounces of water, sometimes with, sometimes without the addition of a drachm of the tincture of iron. He reports cases of epistaxis, hematuria renalis, purpura hemorrhagica, menorrhagia, hemoptysis, etc., which were cured by this agent after the failure of various other modes of treatment.—*British Medical Journal*, Oct. 30, 1880.

SOCIETY PROCEEDINGS.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, October 11, 1880. Dr. Pollak in the Chair.

PECULIAR CONTINUED FEVER.

Dr. Robinson called attention to a peculiar form of continuous fever, apparently beginning as a remittent but passing into a persistent febrile state; has had a number of such cases. They exhibit no other symptom of typhoid fever than the persistent elevated temperature and a somewhat accelerated pulse, 90–100. There are no sordes, no petechiæ, no violent symptom of any character; in one case only there was a little delirium for a night or two; no tenderness or enlargement of the spleen; quinine was not only of no benefit, but seemed to produce an undesirable quininism; followed a placebo treatment and light diet; thoughtthe cases might be described as typho-malarial.

Dr. Tuholske had seen several such cases and had made particular note of them on account of their singularity. The patients had two to three days of general malaise before keeping the bed, scarcely appearing to be sick; during the attack the pulse was never above 80, soft and compressible; skin apparently normal; tongue moist and not coated; urine not scanty, rather high colored and of high specific gravity; temperature for days per-

sistently 102°–103°; no tenderness over liver or stomach; no gastric irritability; no purpuric spots anywhere upon the body. Without any premonition hemorrhage from the stomach sometimes occurred and in large quantities, blood being vomited to an alarming amount; at the same time there was no diarrhea, but rather a tendency to constipation; quinine under all forms of administration failed to produce lasting effects; a temporary slight depression of temperature being, in any case, the only result. The cases usually terminate favorably in two to three weeks.

Dr. Moses had seen cases that might be termed typho-malarial. He had observed that the disease occurred in persons who had not long returned from absence in the East. Upon inquiry this was learned not to be the experience of the preceding speakers.

Dr. Prewitt stated that he also had had his attention fixed by the peculiarities of a number of cases of similar character: sudden fever, pulse 84, continuous temperature of 104°, tongue clean, no diarrhea, and no distinctive typhoid symptoms. The fever ran its course in three to four weeks. Found quinine of no effect. In one case, that of an old woman, there was excessive epistaxis and purpuric spots; she died from exhaustion—hemorrhage from the mucous membranes. While in charge of the city hospital, having several thousand cases of fever, he had never met with the type under consideration; considers it to be unique and due to a specific poison.

Dr. Glasgow had seen, of late years, similar cases at the Charity Hospital, with hemorrhage from the gums and stomach.

Dr. Moses considered genuine typhoid fever to be very rare in St. Louis, while formerly it was rather common. As far as the apparent incompatibility of malarial and typhoid fevers in the same locality, he had noted typhoid frequently in Savannah, Georgia,—a malarial locality.

Dr. Robinson said ten years ago typhoid was quite common in St. Louis; it is now rare. Had cases constantly in his clinic at the City Hospital; now a winter may pass with but few illustrations. Thought the disappearance to be due probably to the more perfect sewerage.

Dr. Baumgarten described three cases like those of Dr. Robinson; the fever persisted in spite of quinine, which, in fact,

seemed to be prejudicial in effect. Thought the habit of giving quinine so freely and at the outset of fever, sometimes obscured the real disposition of the disease. The febriculæ last but a day, their nature is unknown; we think the quinine has cured when in reality there was no call for its exhibition, the disease being self-limited and of short duration.

Dr. Gehrung, in answer to inquiry respecting typhoids in Colorado, gave it as his experience that the fever there presented marked variation in symptoms from the type prevalent elsewhere; the petechiæ were absent, while other true typhoid symptoms were present, hemorrhages, sordes, etc. Eastern physicians were inclined to doubt the typhoid nature of those fevers. Their course was three to four weeks.

Dr. Steele brought up the subject of administration of anesthetic during sleep. Thought it to be a valuable method when dealing with refractory patients, as children, nervous and excitable adults. Had resorted to this means in case of a child requiring a minor operation. A small amount of chloroform sufficed to produce full insensibility; the operation was performed, the child not awakening, and subsequently being entirely unaware of the practice. This easy mode of anesthesia explains the possibility of burglaries, rapes, and similar violence while the victims are sleeping.

Dr. Leete stated that in an army hospital, 1861, a very troublesome patient came under his care for carbuncle, which required the severest local treatment; he resolved to overcome all difficulties by administering chloroform during sleep, one drachm produced insensibility; the operation was performed without awakening the patient.

Stated Meeting, November 8, 1880.—Dr. Papin in the Chair.

Dr. A. J. Steele read a paper on "Motion to prevent Anchylosis and as an element in the Treatment of Joint Affection."

Dr. S. G. Moses reported a case of the peculiar continued fever which was discussed at the last meeting. No advantage had been found from the administration of quinine. Even 60 grains had produced no effect, except some irritation of the bowels; there was no tinnitus aurium. The case had continued for four weeks. Profuse diaphoresis had occurred at different times. No diaphoretics had been used in the treatment. He had used placebos, and endeavored to maintain the nutrition. Had given some champagne by way of stimulant. The patient was a strict vegetarian and he had therefore found some difficulty in supplying sufficient nutriment. There was a complication from an abscess of the middle ear. There was no remission of the fever, the pulse was 110 from the commencement of the attack; tongue slightly coated; pupils were dilated; no delirium, unless under influence of opium.

Dr. Hodgen thought there had been irregular remissions in cases which he had seen.

A discussion then followed, in regard to the nature and results of the injury designated "Barton's fracture," in the course of which it was shown that two different fractures have been confounded under this name, some surgeons understanding by it, a fracture of the styloid process of the radius, while others give that name to a fracture of the end of the radius, involving the joint and the posterior border of the articular surface.

Referring to anchylosis following upon fractures adjacent to or involving joints, *Dr. Hodgen* said that in cases of injury, adjacent to or involving joints, he always keeps joint immobile so long as there is any remnant of inflammation. He has never had a complete anchylosis in any of these cases.

Dr. Hodgen called attention to the importance of correct

position in treating injuries of the elbow joint. It is an error in these cases to place the forearm in a supine position or with the thumb up. The joint should always be flexed at a right angle, with the palm downward; for in case of even partial anchylosis the hand will be much more serviceable in the latter position.

SELECTIONS.

THE ALASKA INDIAN DOCTOR.

The Indian doctor is called *ischt* in his own tongue, and *shaman* in the Russian. When a male child is born with a curl-lock of hair, it is a sign that he is to be a doctor. He is carefully fostered by his parents and friends. His hair is not cut nor combed, nor is he allowed to eat clams, crabs or any beach food. It is seldom that an infant is born with the desired curly lock. Years ago the credulous were deceived by designing relatives who would present the child with a curl made by hand. It is seldom that a boy with a genuine curl makes his appearance. There are others who aspire to the position and influence of doctor. When one dies, an Indian will go upon the roof and call for the yake or demon who dwelt in the body which is now lying in state and surrounded by mourners. If he comes he will be apt to enter into one of the young men who are standing around the corpse. He falls as if he were shot dead. This is the sign that the old doctor's demon has entered into the man. He is taken off to one part of the house and covered with a blanket. He pretends to be wholly unconscious. There is a tacit understanding between the man who calls the yake and the one into whom he is supposed to enter. Sometimes an Indian falls so violently as to injure his head. This has its proper effect upon the bystanders. Others who have neither curly hair nor possessed, become doctors. Often a nephew, the doctor's sister's son is the favored one. All candidates must endure the test. When the proper time

arrives the person who is to be initiated goes to the tomb of a doctor whom he choses as a sort of patron. He is attended by two watches of relatives, four in each. The test is an absolute fast for eight days. He sleeps one or two night in the dead-house. The watchers are to see that he does not break his fast. He is allowed the use of tobacco. These persons who guard him are usually relatives. While he is fasting he makes up his songs which he will sing when called upon to cure a sick person. His guard learn the same song, for they are to be his attendants in the future when he practices his rites.—*J. G. Brady, in the Herald and Presbyter.*

NOTES AND ITEMS.

REAL AND APPARENT DEATH.—Hold the flame of a candle close to, *but not in contact with*) the skin sufficiently long to render the cuticle easily detachable from its subjacent connections; if the body is dead, the parts beneath will present a crisp, yellowish-white, horny appearance, unaffected by pressure; if alive, there will be readily perceptible a vital redness, distinguishable from all *post-mortem* discolorations by its repeated displacement and re-appearance under alternating pressure by tip of the finger or otherwise. Exposing the part to a bright light, and examing it through a magnifying-glass, will render the different phenomena more evident.

Kindle a piece of paper soaked in any alcoholic liquor, put it in an ordinary drinking glass or goblet, and invert this over a part of the cutaneous surface where all its edge will come into accurate contact with the skin; if there remains a minimum degree of vitality, a state of superficial capillary congestion will be induced, with its unmistakably recurrent characters; whereas the absolute inability to excite such vital reaction in any part of the trunk's surface, and the production of solely physical effects by such potent agencies, are infallible evidence that all vital correlations are irreparably destroyed.—*Dr. Wm. Fraser in Popular Science Monthly.*

TWELFTH DISTRICT OF MISSOURI MEDICAL ASSOCIATION. In the list of officers of this Association in the last issue of the COURIER, we accidentally omitted the name of the First Vice-President. It is Dr. J. C. Hearne, of Hannibal.

THE AMERICAN MEDICAL BI-WEEKLY.—This journal, which was formly published in Louisville, Ky., and which had nearly reached the close of the eleventh volume when the severe and protracted illness of the Editor compelled its temporary discontinuance, is now, on his entire recovery, restored to its position among the Medical Journals of this country. The Editor, Dr. E. S. Gaillard, having made his home in New York, the Bi-Weekly is now published there. The first number of volume twelve has been received. It is now a double column Medical Journal, larger than the old Bi-Weekly, and is published at $1.00 a year; the former terms being $3.00. The Bi-Weekly is with pleasure again placed upon the Exchange list. Its address is Box 1124 N. Y. City.

OBITUARIES.

ROBERT CEELY, of Aylesbury, whose name in connection with vaccinia, is almost as familiar as Jenner's, recently died at the advanced age of 83 years. To no observer is medical science men more indebted for a careful, accurate and comprehensive study of the natural history of vaccination.

DR. WILLIAM LANDER LINDSAY, a talented Scotch physician and author of "Mind in the Lower Animals in Health and Disease," besides numerous other contributions on medical and general scientific subjects, died in Edinburgh on the 24th Nov., aged 50 years.

PROFESSOR DUMREICHER, of the new Vienna Medical School had suffered for many years, from an organic disease of the heart. He was an indefatigable worker and has at last succombed to the effects of disease and overwork. "A year ago a patient called on the professor and received the following opinion: My dear Herr H—. you and I have the same complaint. We are booked. It is but a matter of time with us; and as you insist on knowing the truth, not a very long time either. Herr H— died on the same day with Dumreicher." Professor Dumreicher was buried on Friday December 8th 1880. He was in his 68th year.

ST. LOUIS
COURIER OF MEDICINE
—AND—
COLLATERAL SCIENCES.

VOL. V. FEBRUARY, 1881. NO. 2.

ORIGINAL ARTICLES.

UTERINE FUNCTION AS A CAUSE OF DISEASE.

BY P. V. SCHENCK, M. D., *Surgeon to St. Louis Female Hospital.*

WHAT effect do menstruation, pregnancy and the puerperal state have in the production of disease? This is, indeed, to the professional man, a pertinent question. When he considers the organ involved, whose normal functions have often the appearance of abnormality, whose tissue is so liable to congestion, whose special functions, the highest in the economy, are so liable to injury and to accident, it is not to be wondered at that the passage from health to disease, from a normal to an abnormal condition is so often made. The query should be, why do not all suffer?

In studying disease of the generative organs, we find that the vulvar diseases of children, the vaginal of young women, the cervical and uterine of middle and advanced age, mark usually the order of attack.

When two organs hold a functional relationship, and are subservient to a like purpose in the economy, it is a rule,

that they react on each other to such a degree that one cannot suffer long and deeply without throwing the other into disorder. The os and fundus, being supplied by branches of the same nerve, and a sympathy existing between these structures, influences acting upon the os and cervix *will* produce congestion of the fundus: hence we have dysmenorrhea, sterility, pelvic pains, gastric disorders and displacements of the womb; and by the increase of vascular congestion we have an augmentation of secretion, leucorrhea. Astruc said leucorrhea occurs in women who are subject to immoderate flow of menses, and that they are liable to this from causes weakening the vessels of the uterus. Dewees, on the other hand, contended that the vessels could not be weakened so as to pour out a fluid, but that the leucorrhea is maintained by some local irritation. This discharge passing over the os, is what Trousseau said, caused nine-tenths of the cases of ulceration; it produces a condition which Dr. Wing, has well compared to the abrasion on the upper lip of a boy, occasioned by coryza. The discharge and the condition which it produces, tend to, and are apt to cause sterility. The non-appearance of a healthy function, is indicative of disease, so also is the effort to interfere with a function productive of disease. No one, therefore, can with impunity interfere with that thrice given command, to multiply and increase. No one can cause the disappointment of nature, under an unfulfilled function, without overturning in some measure, the accurate adaptation, the smooth-running (God's) machinery. No physiological process is so carefully guarded as conception.

It would be trenching upon the field of the obstetrician to inquire into the etiology of diseases known as the diseases of pregnancy; but there is a so called ulceration of the os uteri during pregnancy. Dr. Henry Bennett with enthusiasm says that ulceration of the os and neck, is the keystone of all the diseases of the pregnant woman, and that those gastric disorders and obstinate vomitings which so often bring women to the portal of the grave, are almost

always caused by these ulcerations. Dr. Clay says also, that he is satisfied, that vomiting is caused by congestion, inflammation and tenderness of the os. But, on the other hand, Huguier says there is no ulceration, that there is nothing but mucus lying in the folds, which can be wiped off, Cazeaux considered these so-called ulcers, physiological not pathological, just like the wine-less color. The ulcerations occurring in the first half of pregnancy, have been studied by Lowery, Cortillas and Coffin; they all class them among the common causes of uterine troubles, with digestive derangements; but Cazeaux accuses these authorities of exaggeration, and Gosselin, Danyan and Cloquet, proclaim the perfectly innocuous character of these ulcerations.

Pregnancy and parturition, are the great causes of endometritis. The statistics taken from all sources, show that pregnancy accounts for more than half; some authors contend, that endo-metritis is impossible in the virgin. The Doctors Haggan say, that in all cases of endometritis, the embryonic tissue is in excess. Schroeder places under the head of causes, anything which produces a stasis of the blood in the uterus; consequently endo-metritis ceases when the uterus becomes atrophied, its walls thin and flabby, and the mucous membrane virtually destroyed. Lanceroux calls this disease a cystic metritis, and says it takes its origin in imperfect involution after labor or abortion. Barnes says the disorders of involution principally affect the body of the uterus. Scanzoni puts down the puerperal state, as one of the most important causes. The first care of a practitioner, says Sir Charles Clarke, should be if possible to remove the cause of disease, but this, referring to endo-metritis, originates from parturition or abortion, the puerperal state is the great predisposing cause, there is an effusion of liquor sanguinis into the tissues. Duparcque says that during pregnancy, the muscular fibres are separated by fibro-albuminous material. Scanzoni says there is hypertrophy of the cellular tissue, and the views of Klob here find the cause of sequent endo-metritis. Thomas says the

parturient process is a very frequent source of the disease; the catarrh, the uterine leucorrheal discharge, have all the same cause or origin. Whitehead and Tyler Smith both state, that the numerous tissues of the genital organs are subject to an abnormal degree of secretion, and this might certainly be expected, when we consider the wonderful sympathies found in parturition.

So intimately are gynecology and obstetrics connected, that a large proportion of female diseases, take their origin in the lying-in room. Mismanaged labor is the cause of much of the gynecological practice. Uterine diseases, says Munde, are, in the large majority of instances, the direct result of parturition. Thomas in confirmation of this, remarks that if we go back to the commencement of all cases of uterine disease, a very large proportion will be found to date from parturition.

It is unnecessary to state the diagnosis of these diseases, how Bennett says the exudation of blood corpuscles mingled with mucus, is as characteristic of endo-metritis as the rust colored expectoration, is of pneumonia; how Thomas places it as a reliable and valuable sign; how most of the pain of endo-metritis is sympathetic or reflex, how some contend that the disease extends from below upwards, and how Tyler Smith has said that inflammation of the os and cervix seldom spreads to the uterus proper; how Byford contends, that endo-cervicitis may exist without there being any appearance at the os, while Bennett describes the os as patent, and the cavity of the neck as enlarged, so as to admit the finger and permit the opening of it by a speculum; how cervical disease, in women who have borne children, is more frequent than corporeal disease and that it is the most frequent disease of the genital system.

A question arises here of much importance, as it involves treatment. Uterine disease, as has been truly said, unlike other pathological states, has no tendency to recover, and a cure if effected, may be claimed as due to medical or surgical treatment. Is the condition inflammatory? Pain

there is, but this is not a sign of mucous inflammation. On the other hand we have blood, and this could not escape from the capillaries of a sound membrane. Barnes does not discard inflammation for congestion; he says, if it produce all the effects, usually attending upon inflammation, the distinction becomes too subtle to be followed out; Byford says it is inflammation, but his definition is broad; he says a permanent increase of secretion in a mucous membrane, is and always should be regarded as an evidence of inflammation in it. Dr. Bennett says endo-metritis is the result of the long existence of inflammatory disease of the cervix, and its cavities. Scanzoni says, uterine disease consists of an inflammation, affecting sometimes the uterus proper, when hypertrophy is produced, but more frequently its lining membrane, when a change of structure follows, and mucus and pus are secreted in great abundance. Niemeyer says it is the result of the rupture of overfilled uterine vessels. Dr. Emmet says endo-metritis is not an inflammatory condition, there is no molecular death following it. Tyler Smith says uterine disease consists of a highly vascular condition of the cervical mucous membrane that occasions a constant, instead of an intermittent secretion from the glands. He says irritation and relaxation should be placed in this disease (endo-metritis) for inflammation, and chronic endo-metritis, spoken of as a chronic inflammation, is neither anatomically nor pathologically correct. Inflammatory conditions are no more the rule with the uterus, than with the heart or lungs.

Ulcerations, except of a specific or malignant character, at the os uteri are rare. Reamy reports that in the examination of eight thousand women, supposed to be suffering from uterine disease, there were but nineteen cases of true ulceration. Erosions at the os uteri are rare. As in virgins, so in women who have borne children, there are cases where the discharge already mentioned, passing over the os, produces erosions. Mundé has shown how extremely rare are such erosions; in seven hundred women examined, and who had uterine disease, he found but three such cases.

There is a morbid condition of the cervix uteri, and it is the most important of all, a traumatic lesion, to which one-half of the ailments among those who have borne children can be traced. This lesion is *laceration of the cervix.* Injuries to the cervix, consequent to parturition, have long been reported. Robertson on Practical Midwifery, 1851, speaking of rupture of the uterus, says, in his third conclusion, that the uterus (in the cervix) seems to give way with nearly equal readiness in all parts of its circumference. Dr. Johnston, in the same year, reports a case where there was a complete separation of the cervix uteri.

The diameter of the os in a non-pregnant woman is about one-fifth of an inch. In order to fulfill the requirements of parturition this must be extended to include the child's head. When, following labor, we meet a case diagnosed as "ulceration or erosion, with patulous os," we just translate these words into "laceration of the cervix," and we have, as Dudley says, the facts. Dr. Cushing says, ninety per cent. of all cases of so-called ulceration are nothing more nor less than laceration. Dr. Emmet estimates that thirty-three per cent. of five hundred fruitful women coming under treatment, and who were suffering from some form of uterine disease, had laceration of the cervix. Dr. Mundé says seventeen per cent., Dr. Hanks eight and a half, Dr. Baker ten per cent. Dr. Goodell says one out of every six of uterine cases have laceration. Montgomery states that fifty per cent. of women having children have laceration of the cervix.

Of the frequency of the different lacerations statistics show that forty per cent. are to the left side, fourteen per cent. are to the right side, and thirty per cent. are double, so that but few suffer from the other lacerations. Dr. May says the left are the most frequent, because the left side is the vulnerable side of women. Dr. Barker says it is because the left occipito positions are the most frequent. Dr. Peaslee agreed in this view, and Dr. Harrison shows that in the mechanism of labor the occiput is directed to the left; hence, the left side is lacerated.

Can this accident be avoided? Dr. Storer has called the attention of the profession to cases where the os uteri has been torn transversely by the passage of large clots in metrorrhagia. Dr. Barker makes the statement that, in his practice, he has seen but few cases of laceration needing treatment, because the cases he sees have had excellent obstetric attendance; but Dr. Emmet says the lesion is found as frequently among those who have the best professional skill as among those who have not; but he adds that among the poor, where the forceps are used, he has seen more double lacerations, and he has found the cervix lacerated in every instance, when the patient admitted the fact of exposure to malpractice. This latter statement Thomas seems to express some doubt concerning. I think the profession could do much if they would bear in mind that chloral in the early stages of labor is as necessary as they generally think ergot is in the later stages.

Does the character of the labor have any influence on the production of this lesion? Statistical tables show that tedious labors have been the most productive of them. Emmet well accounts for this, from the fact that it is natural for a woman to regard a rapid labor as a tedious one. In the only case which I have had under my care that proved fatal, the injury being followed by peritonitis, the patient stated that she suffered from but a single labor pain; the child was born, like that of the Egyptian woman, before my medical assistant reached the room.

What are the ill effects of this lesion? Their name is legion. Hippocrates said "the womb is the whole of woman." Any traumatic injury of the womb affects more or less the whole general system. If parturition results in laceration, the woman becomes an invalid; she runs the risk of septic trouble. As Thomas says, a patient may absorb septic material from the lochial discharge, which is nothing but disintegrating uterine elements in a serous liquid, just as she would from a cut on the finger while dissecting. A person not only may receive a septic poison from this discharge through the contact with the angry-

looking surfaces of the laceration; but this discharge prevents healing of the lacerated os. Such persons have a bad getting-up. About the third day they have fever, which formerly was called "milk fever."

This lesion prevents involution; the hypertrophy of the uterus was physiological in its origin, but it becomes pathological in its permanency. Dr. Fordyce Barker says the question in his mind is, does subinvolution prevent cicatrization of the laceration? or is the laceration the primary condition, and that which prevents involution of the uterus? He puts down sub-involution as never occurring in persons who have proper medical attention and hygienic treatment to effect proper involution of the organ. This interrogatory has long since been answered by the profession, as a late authority states that for many years he has met with few or no cases of sub-involution which were not due to laceration of the cervix. Now, then, all the effects of sub-involution are the effects of laceration of the cervix. Thomas says: "In a large majority of cases of uterine disease, the first link in the morbid chain is sub-involution, which produces, as direct consequences, passive congestion, hyper-secretion by the lining membrane, menstrual disorders, displacement, sterility and interference by pressure with neighboring organs." The uterus, in consequence of its great weight—fatty degeneration not having taken place, old structures not being removed, remaining composed as it is of old material—becomes displaced by force of gravity. Bozeman has called the attention of the profession to the mechanism of retroversion and prolapsus of the uterus considered in relation to simple laceration of the cervix.

Endo-metritis and endo-cervicitis are caused by this lesion. Gardner, years ago, placed this as a canse. Emmet has always contended that laceration of the cervix is a powerful factor in the production of endometritis. Following the tear of the cervix we have uterine engorgement, the arteries carrying more blood than the veins can return, from which, as a sequence, we have leucorrhea; the harmony between the

os and body is interfered with; there is a constant source of irritation, a teasing, ineffectual contraction going on with relaxation and expansion, with the vessels never at rest. All of Dr. Barker's cases, with one exception, had leucorrheal discharge. Williams says all cases of laceration suffer from uterine catarrh. Thus we approach the primary cause in most of the cases of that disease, which has been familiar since the days of Hippocrates. That disease, Gardieu used to teach, was from hereditary causes. The ancients referred it to the wonderful sympathies which exist between the womb and the nervous system. It has always been ranked among the *opprobria medicorum.* It has long been debatable ground whether it is the attendant of corporeal or cervical disease. Recamier, Lesfranc, Dupuytren, Duparcque, Gilbert, Kennedy, Murphy, Locock, Roberts and Bennett all state that the peculiar lesions of the muco-genital tissue are constant attendants on chronic leucorrheal discharges. While Lee, Ashwell and Smith all state that ulceration of the corporeal portion is rare; but most investigators, even those who do not place laceration as a powerful cause, think the so-called ulceration of the cervix productive of leucorrhea, and that there must be an abnormal vascularity and hypertrophy of the glandular structure of the cervix.

Cellulitis is produced by laceration. This condition is rarely met with except after the parturient process; and Emmet says it is the most common result of laceration.

Nervous and gastric disturbances follow laceration. The symptoms of the lesion are often those of hysteria, nervousness, wandering pains, disturbances of temper and spirits. Many women have described to me a sensation as if the womb moved, some have expressed it as a fluttering feeling in the womb. A purely functional disorder is of rare occurrence in the uterus, but the nerves of distant organs are often affected. Disease, not unfrequently, is transmitted from the nerves which it affects to other nerves and to central organs. Crofford has reported many cases of hysteria from diseased cervix uteri. Wilson says he has seen

few cases of laceration where there was not reflex trouble. McBride reports a case of hysterical anuria cured by restoring a lacerated cervix, where all other means had failed; Sutton reports a case of cataleptic convulsions cured by trachelorrhaphy. Scanzoni says the most curious hyperesthesia and anesthesia of certain parts of the body, the most persistent neuralgias and spasmodic contractions, spreading often to numerous groups of muscles, claim, frequently, if not always, for their sole cause an affection of the womb. Dr. Barker reports a retroversion of the uterus of four or five days duration, which resulted in positive insanity, which was cured by replacement of the organ. Childbearing has always had an important relation to mental disorders, it produces a marked tendency to the inception or renewal of mental diseases. Dr. Ollivier, after a large experience with the insane, and careful examination of the subject. says the uterine affection which most commonly deranges the reason of women is ulceration, more or less severe, of the cervix uteri. So positive have been the results of his observation on this subject, that whenever a woman comes to consult him with any mental disturbance, or any disease of the imagination, he never fails to discover some irregularity in menstruation, or some ulceration of the cervix uteri. The gastric disorders are too well known to call attention to. Colombat says that cases of ulceration (a condition we now know as laceration) of the os uteri have been treated as cases of chronic gastro-enteritis, because they exhibit many symptoms of that disease, which were, in reality, nothing more than the abnormal pathological reaction of the womb. Niemeyer's case is of interest, in which he reports cardialgic attacks occurring every four weeks and which could be excited at any time by application of leeches to the neck of the womb. McSherry reports a case of dysentery, unrelieved by all other means, cured by operation upon a lacerated cervix. These are but few instances of that acknowledged fact which we know as nervous sympathy.

Laceration of the cervix causes sterility. Here we have

the reason why many women, after having one or more children, spend years in matrimony without an increase in the number of their offspring. Such persons are far from being in rugged health. Dr. Levy, of Munich, says the great cause of sterility is uterine catarrh, not fluxion or stenosis. This he has proven by examination of spermatozoa. Hausmann has shown that dilation of the os, with sponge tents, in case of contraction will not facilitate impregnation on account of the discharge it produces. It is easy to understand that the impregnated ovum would find it difficult to graft itself on a membrane where there is hypersecretion. Indeed, I have often thought that in catarrh of the womb, if sterility was not produced, the ovum would be carried so far from the fundus as to plant itself in a location for the production of placenta previa. I have no statistics npon this subject, but all the cases of placenta previa which I have met, have occurred in multipara and they have all stated that they suffered previously from leucorrheal discharge. Dr. Goodell says laceration is so common a cause of sterility that he always suspects its existence whenever a guileless woman stops bearing after her first labor. Of the one hundred and sixty-four cases reported by Dr. Emmet, the last pregnancy preceded the examination from ten and a half years to three years; and there is no proof that a single one of the one hundred and sixty-four became impregnated after the laceration. A laceration that is insufficient to interfere with involution may interfere with pregnancy. Cases of laceration that become impregnated seldom reach full term, the tendency is to abortion; the cervical integrity is lost; the everted edges of the cervix with consequent rolling out of the intra-uterine tissue, would afford a poor support for the gravid uterus. Dr. Cleninger reports a number of cases of abortion resulting from laceration of the cervix uteri.

Laceration of the cervix presents a surface often attacked by cancer. It has long been noted that sarcoma of the womb occurred in those who were not married or sterile, while epithelioma was developed in the women who have given

birth to a number of children. Dr. Briesky has shown the tendency of this condition to carcinoma; epithelioma of the vaginal portion of the neck is the most frequent of uterine cancers. Dr. Emmet says he is impressed that the exciting cause may, some day, be traced to a local irritation set up in consequence of injury, likely from laceration of the cervix. Esmarch says epithelioma finds an inviting nidus in a laceration of the cervix uteri, and it is noted that the disease seldom occurs on a nulliparous os. Dr. Emmet has never known such a case, and my experience of six years in charge of a hospital exclusively for women affords a repetition of Dr. Emmet's observation.

The conditions produced by this lesion, unless remedied, will continue to become more serious, the circulation is interfered with, the intra-cervical tissue everts and produces by its own constriction more congestion. As Emmet describes it, there is a cystic degeneration; the outlets of the mucous follicles are blocked up, and the flaps of the mucous membrane become almost strangulated; the acid secretion of the vagina meets a surface intended to be bathed in an alkaline secretion; there is a constant friction brought to bear upon the parts; the loss of the keystone or a segment of it, interferes with the functional power of the os and cervix; the fundus has lost a controlling power; like a balloon with a broken car, unable to hold an educated balloonist, the fundus with partial contraction, partial relaxation, unable to throw off useless material, falls back or forward, either way its gravity may tend, thus keeping up a constant mucous irritation. Add to what has already been given, that when combined with anemia, we have neuralgias; that the menstrual flow is increased; that we seldom have a laceration of the cervix uteri, without a laceration of the perineum; that the lesion may extend into the bladder, forming a vesico-utero, or a vesico-utero-vaginal fistula; that we may have a cystocele, and rectocele with an irritable bladder, and a packed intestine, which may be the starting point of a mental derangement, going on to a grave form of hypochondria.

Now is there no remedy? The day when physicians feared to use the speculum, when they contended that organs so important for the furtherance of the great aim of creation, could not be so diseased as to render personal examination necessary, when they gave drugs *ad nauseandum*, when they endeavored to cure ovarian tumors by the use of diuretics, those days have passed; now such a one would be a Rip Van Winkle in the profession, like the quiet dweller in the essayist's, inland city, who while around him battles have been fought, kings have died, history has been made, all unheeding and untouched has watched apples redden, wheat ripen, has smoked his pipe and quaffed his mug of beer, rejoiced over his new born children, and with proper solemnity carried his dead to the church yard; the hands on the church seems always pointing to one hour, time with him has fallen asleep in the afternoon sunshine.

This is a day, in our profession, of accuracy, and the exploration of the womb has made the study of its diseases no longer occult. Sims' speculum has brought to light more facts of importance to the physician than any other appliance. The use of it depends not so much often on the eye as the brain which appreciates. The doctrine of Bennet discovers the unmistakable evidence of chronic inflammation, ulceration, etc., requiring destructive agents for its removal. Name rules the treatment; ulceration calls for heroic treatment. Lee discovers nothing but a slight abrasion of the epithelium, a catarrh like that of the Schneiderian membrane. Emmet concludes that there is a laceration and that passive inflammation is a myth. Tilt finds the cause of disease in the ovary; Bennett in the neck of the womb. The former applied remedies to the ovarian region, the latter used potent caustics to the intra-vaginal portion of the cervix. Smith thought all uterine diseases dependent upon constitutional conditions, and for their alleviation he relied on constitutional treatment. Bennett says the cause is local, and he has always contended that treatment applied to the cervix uteri will cure endo-metri-

tis. Then comes Scanzoni who thinks chronic catarrh incurable by local application, while Jacobi asserts that under most conditions lacerations will get well, and so will the uterine catarrh. Chapman cures all uterine ills with leeches; Braithwaite recommends nitric acid; Marshall Hall and Sir Charles Clarke, Robert Lee and Ashwell think the constitutional treatment the most important; while Chomel and Lisfranc think the local treatment of primary value. Chomel thought caustics a specific; Arendt used creosote injections; Aran protects the parts with collodion, while Lacouski thinks there is a want of local tone, and uses ergot. The pathology of the cervix, says Barnes, differs from that of the body in its proclivity to disease and its tolerance of traumatic injuries, the gravity of the influence of disease or traumatism on the general health, and the tendency to restoration either spontaneously or by resource of art. Physicians dealing with the lesion of laceration and its attendant conditions treat their patients differently, they do not, as Thomas says, take a view from a broad and comprehensive standpoint, they neglect the whole chain to grasp but one link. One finds a displacement, one an ulceration, one an endo-metritis, and another a leucorrhea.

Dudley says, never was a false theological dogma more thoroughly ground into a credulous people, than this unfortunate delusion of ulceration and erosion is now ground into the intelligent profession. The doctrine of ulceration has been inculcated as far back as 1653. William Harvey said that by examination with the speculum matricis he found a discharge which he knew came from a lurking ulcer of the womb, and in the injection used he added a little Roman vitriol, because he suspected the ulcer to be inveterate.

Dr. Emmet has shown how to diagnose laceration of the cervix uteri. We will no longer have to search the musty records of every dead house and hospital to learn if those angry everted lips of the cervix uteri are ulcerations. We will no longer have to inquire whether what Bennett described, are forms of ulceration or not. Neither will we say with Smith they are not ulcerations, because they

are not excavated. Neither will we look upon these surfaces as abrasions, nor will we see in them aids to diagnosis, indicating, as Dr. West suggests, the condition of the body of the womb, just as the mucous membrane of the tongue and mouth betrays the disturbance of the digestive system. The profession have long wished for light on this subject,cases of ulceration or erosion, so-called, of the os uteri are so common, and in hospital practice so numerous, that some more efficient and less troublesome methods of treatment had to be adopted. Dr. Emmet has with his tenacula demonstrated, as Peaslee said, that what all supposed to be an ulceration was nothing more nor less than a laceration.

If, says he, you pass your finger into the vagina, you feel the os internum, not the normal os; you feel a long roughened surface covered over with granulations. If you use the speculum you see a red, raw surface; using the probe you will find the uterus measures more than the normal depth, if the laceration be of one side with inflammation of nearest broad ligament, the uterus is drawn to that side, the ligament has been shortened from cellulitis, the flaps separate, the two edges with injured side forming, as Emmet expresses it, a tripod, two legs shorter than the third. This tilts the womb to one side. In doubtful cases seize the two lips with a tenaculum, bring them together and the neck will appear near the natural size.

For this lesion there is but one remedy. Dr. Emmet first recognized thoroughly the lesion, and he demonstrated by his operation a rapid and reliable cure. The operation is one of the most simple and yet one of the most satisfactory in the department of uterine surgery. Peaslee said it was a master stroke of genius. Dr. Fordyce Barker says his contribution on the subject is one of the most important contributions which has been made to gynecology. The great man is he who does a thing for the first time. That portion of the world traveled over is the only part truly known. Perfection in our profession is only reached as we succeed in curing disease. A human life

should not be ventured on mere theory, let the argument be ever so complete. Dr. Emmet did wisely therefore not to report this operation until he had had two hundred successful cases, even though he ran the risk of having some one as far off as Denver, Colorado, dispute with him the question of originality. The operation consists in paring the torn surface with a right or left knife or a scissors leaving an undenuded tract from which to form the continuation of the cervical canal, pass deep sutures of silver wire, so as to approximate the parts thoroughly, fasten the wire, then unite all in one, covering the end with rubber tubing as in perineorraphy. Dr. Skene has recommended silk sutures while Dr. Herrick, of Michigan, uses the ordinary stationers' rubber bands to hold the denuded surfaces together. Put the patient to bed, no other treatment than absolute rest is required for seven days; on the ninth day remove the stitches. Now if successful in obtaining union by this simple operation—an operation perfectly painless, no anesthetics are required—what has been accomplished? The neck of the womb contracts, the everted tissue is rolled in, the circulation is restored, the cysts of the numerous follicles are ruptured and emptied, the reduplication of the vagina is disposed of, so that, as Dudley states, the attachment appears in its true relationship; there is now a healthy involution taking place, no more spasmodic contraction and dilatation occur; the normal functions of the cervix and os are restored, and a healthy impulse is imparted to the body of the womb, and if it be diseased it is thus cured. The constrictor oris et cervicis uteri muscle, as Bucklin has termed it, is readjusted, the artery, the veins, the lymphatics and the sympathetic nerves are normally compressed in their function of emotional life; the suction power of the os is renewed, the arbor vitae, the stairway for the spermatozoa is replaced; the vaginal acids no longer are in the cervix to kill spermatozoa; the denuded portion of the cervix is covered, and no longer presents, as Goodell says, a barrier to the migration of spermatozoa, which heretofore had opposed them as a

desert prevents the advance of an army; the vessels of the womb are at ease, the muscles are at rest, the granular erosion, the papillary erosion, the ulcer, the cockscomb granulation, the cervical enlargement, the abnormally shaped os, all these can no more form the text of clinical lectures, and they are no more to be gibbeted with stern pessaries, guillotined with the ecraseur, beheaded with the curette, cremated with the white hot iron, poisoned with nitric acid, or tickled up to call again with iodine. The uterus will now become smaller, displacements, unless congenital, will be overcome, and the woman placed in the situation God intended her to be, her womb again in order for another occupant, and she ready to fulfill her highest function.

The result of such an operation, such surgery, is complete: an organ is restored to the performance of its functions. No appliance or other application will do this. Astringents, though they harden, will not cure. Tilt, though educated in France with Bennett, was driven from one pole of the internal sexual organs to the other, from the os to the ovary, in his applications for the relief of uterine disease. He says, after curing patients of all tangible disease of the neck of the womb, some would continue to suffer as much, or almost as much, as before. Dr. Barker admits that the so-called cure obtained by local application is temporary, and that patients that he had supposed that he had relieved, returned again as bad as ever. It is true that many roads lead to Rome; but, nevertheless, Dr. Jacobi's actual cautery will not cure; neither is Dr. Amidon's grafting process a succees. The old treatment, instead of doing good, resulted in positive harm; it caused a general nervous condition and neuralgias. Says a late authority, the man who succeeded best in the treatment of uterine disease was the one whose treatment was followed by the smallest amount of cicatricial tissue. The anemic, nervous, neuralgic diathesis is often associated with cicatricial cervix. Emmet's operation excludes amputation of the cervix for hypertrophy and elongation. Dr. Jackson says, when the truths of

these operations are known and accepted, we shall hear less of the uselessness of pessaries for fallen wombs, less of amputation for enlarged ones, know less of failures to cure the whites, see less of pallid patients who wander from one doctor to another to have, by each in turn, the ulcers burnt off. Dr. Dudley puts the forcible statement that if the operation were followed by none of the good results so confidently claimed, it would be a justifiable procedure, inasmuch as it causes those tissues which have been the object of so much violent and fruitless treatment to be removed from the field of the speculum and from the approach of the porte caustic.

Of this operation there are many able advocates. On the other side of the Atlantic, there is Horwitz of Copenhagen; Rokitansky of Vienna, and Briesky of Prague. On this there are Baker and Hanks, Chase and Wing, Goodell and Cushing, Skene and Jackson, Mundé and Dudley. The latter proposed the name of hystero-trachelorrhaphy for the operation. There are those who oppose this operation. They have criticised, but none have dared come out in an article against it. Some oppose through ignorance; they keep their eyes on iodine applications, as the man in Pilgrim's Progress did on the muck rake. There are many who flatter themselves that they have mastered the art as a specialty when once in possession of a porte caustic and a speculum. Such do not understand the principles of the operation. There are, again, those like Dr. West, who think that if the cervix is structurally of so low organization, physiologically, of importance so much less than the body of the uterus, liable to alteration in its intimate structure, and, if so comparatively insensible to rude modes of therapeutic interference, it certainly does appear an extravagant assumption that some slight abrasion (or laceration) is capable of causing a list of ills so formidable as are attributed to it, and that alteration in its function will react so powerfully on the general health.

There are other opponents, again, who look upon this operation as an innovation—one made by a man now liv-

ing. Great men, with the exception of themselves, perchance, are supposed to have all passed away. Such opponents as these retain dead men's ideas, just as the atmosphere retains the light and heat of the set sun; such men are, in our profession, not lights; they are twilights; they are criminals in their perverse and obstinate opposition to truth in the face of evidence.

National jealousy has had its influence. Foreign authorities do not mention the lesion. The entire profession of Europe, except a few Germans, seem, as Dr. Dudley says, asleep to the vast importance of the operation. and they continue to mistake the cause for the effect. The *Medical Times and Gazette*, of London, in its review of Dr. Emmet's book, speaking on the subject of laceration, thinks the cases in this country must differ from those in England. The English and Scotch writers condemn what they call Emmet's far-reaching effects of the tear of the cervix. They commend Dr. West because he opposes surgical greed, and condemn Dr. Emmet because, say they, he would reduce the whole of gynecology to a department of surgery. They think they see in it a reckless enthusiam for the eclat of operations. Dr. Atthill, of London, says that in Emmet's operation we are too apt to lose sight of every therapeutic appliance except the knife. Dr. Hewitt, in his late work, fails to appreciate the pathogenetic importance of laceration of the cervix. But the question has too much force in its efficacy to relieve suffering women not to work out its own true position.

During the past year the medical men are turning more and more their attention to its importance, and on the other side of the Atlantic already the leaven is beginning to work. Dr. Macan, of Ireland, in his half-yearly report on Midwifery and Diseases of Women, says, referring to Dr. Mundé's able article, that he (Mundé) will soon be no longer able to quote the Dublin School of Gynecology as refusing to recognize the true etiology of those cases of eversion of the cervix, or the importance of the operation that has been so ably devised by Dr. Emmet for their per-

manent cure. There are some who contend, though they are advocates of the operation, that in slight lacerations, or where there is no eversion, it should not be performed. Dr. Wing thinks that small lacerations need no operation, because the tissue can be hardened by astringents so as to bear exposure to friction. Dr. Fordyce Barker says many cases of laceration will get well without surgical interference. Dr. Balleray recommends, after labor, to keep the patient in bed from nine days to two weeks, and use carbolized warm water injections as a certain cure for laceration of the cervix uteri. Many advocate that subinvolution with slight laceration will get well under the use of ergot, iron and nux vomica, with hot water injections, without an operation. Thomas cautions against attaching too much importance to cervical lacerations, and fears that in the great advocacy of trachelorrhaphy the song of England's humorous poet, stitch, stitch, stitch, will apply to human flesh as well as baser material; but all the troubles of laceration are not due solely to friction or to subinvolution. Where we do not have the latter we often have endo-metritis or cervicitis. We know that a small break in the keystone of an arch renders the whole structure in danger of falling. So it is in slight lacerations. The severity of the symptoms are not always in accordance with the severity of the lesion. Dr. Emmet says the laceration may not extend—passing through the mucous membrane without extending to the vaginal cervix. In many instances where enlargement of the uterus still remains, or where the woman suffers from neuralgia, the operation is necessary, though the parts may have completely healed. Dr. Mundé, speaking of such cases, says the patient suffers from leucorrhea, headache—possibly neuralgia—and may present marked nervous troubles. We should operate; the cure is more reliable. There is no doubt that nervous influence has a great power in uterine catarrh: it alters the secretion. After a hysterical attack leucorrhea, already existing, is decidedly increased. Dr. Briesky says, in this operation we remove the tendency to carcinoma. It stops cancer by

stopping nutrition, on the principle of Shylock, who says, you take my life when you do take the means by which I live.

Dr. Dudley says there are those who still approve of and use the old treatment; but it will not make a permanent cure, and it is better, at any rate, for the patient to be freed from trouble in a fortnight by a safe and certain method than to pass through months of treatment for an uncertain result.

FORCEPS VERSUS PODALIC VERSION IN CONTRACTION OF THE PELVIS IN THE ANTERO-POSTERIOR DIAMETER OF THE SUPERIOR STRAIT.

BY M. YARNALL, M. D., ST. LOUIS.

[*Read before the St. Louis Obstetrical Society.*]

THE most common of all deformities of the pelvis is the contraction of the conjugate diameter of the superior strait.

I have been anxious to hear the opinion of the members of this society as to the propriety of using the forceps or performing podalic version in these cases. Unless the contraction is very great, the question of craniotomy is of course excluded. Such I do not intend to consider.

I have delivered nineteen children in cases where this deformity existed, the diameter being in some cases three inches and some minus three inches.

I have reported the very difficult cases and omitted those that gave me but little trouble; they are not as satisfactory to me as they would have been had I known the value of

version earlier. About one-half were delivered before my attention was called to Dr. Goodell's admirable paper on this subject, in which he so ably advocated version in preference to the forceps. Previous to reading it I never dreamed of doing else than apply the instruments. As in breech presentations the infant often perishes when the pelvis is normal, I did not think to resort to means, at best, more or less dangerous. Later experience has taught me otherwise, and I now believe version should always be practiced in these deformities.

Among my first cases was a patient who had been instructed in New York City, where she had been delivered, to employ a physician, wherever she might be, to deliver her, because she had contracted pelvis, and would have trouble in parturition. The delivery was effected in the presence of Drs. Papin and J. C. Yarnall, with forceps applied above the brim. The head was transverse, as is almost invariably the position occupied in these malformations. Necessarily one blade of the instrument was applied to the face, the other to the occiput; the impression made by the promontory of the sacrum was visible on the parietal bone. The child, which was small, lived, and the mother did well.

Two cases were with Dr. Housmann, he having sent for me. One was delivered with forceps, with great difficulty, and was but a repetition of the preceding one; both mother and child did well. The next one was not so fortunate in its results. The mother perished before she could be delivered. We used forceps here too. I have always regretted that I did not try version in this case. I made a *post mortem* examination. The diameter was less than three inches. Strange to say, the woman had had several children, but they were small, and her labors had been protracted, though natural.

One woman I delivered twice, both times from above the superior strait, with forceps. The first time the child was alive, but died in a few minutes. The second time I had Drs. Kennett and J. C. Yarnall with me. I induced prema-

ture labor at eight months, but was unsuccessful, as the child died before I could deliver it. The woman had had two children before I attended her, both of which she lost, and had been advised to have premature labor brought on early in the seventh month. I had great difficulty in inducing her to allow me to do so at the eighth. The woman did well each time.

Another woman I attended twice. The first time I succeeded with forceps; the head was small. The next labor the woman perished after the delivery was accomplished. This was a dreadful case; I had two prominent medical gentlemen in consultation, both members of this society.

One case was an induced premature labor, induced with Molesworth's dilator, at the seventh month. Version was resorted to, and the child died; the mother did well. I was this time consulting physician with a prominent German medical gentleman of North St. Louis. Craniotomy had been performed in a former labor.

One woman I have delivered three times; on the first occasion I delivered her of a small girl baby, with forceps, successfully. Since then, on two occasions, the forceps were tried above the brim and failed. I then turned and delivered, but not living children. I broke the necks of both. The last time I was assisted by Mr. Rielly, medical student. The woman suffered greatly afterwards, and made slow recoveries. She is just now in the seventh month of gestation, and I am urging her to allow me to bring on labor at once.[1]

Another woman I have attended three times. Twice I have been assisted by Dr. J. R. Papin. Each time I have turned, and once I broke the neck of the baby; the mother got well without trouble. The first time I tried the forceps and failed, so version was resorted to at once in the after deliveries, with the results stated.

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1 I have, since writing this paper, delivered successfully this woman of a small child.

Another woman I have delivered of four children; at the first labor of twins, the first child with forceps—it was quite small; the second twin was larger; the forceps would not do, version succeeded, and the woman did well. The next time I turned and delivered a dead child with great difficulty. The last time I was assisted by Dr. J. R. Papin. The forceps would not do, version succeeded so far as the delivery was concerned, but the child perished and the mother barely got well.

In another case, after turning, I failed to deliver from exhaustion. Dr. Papin, Sr., was sent for and completed the delivery. Of course the child was dead, but its neck was not broken. The mother made the most remarkable escape that it has ever been my good fortune to see, she had violent puerperal fever, but recovered.

In a number of the cases here reported, when the head had passed the promontory of the sacrum, which it did with a jerk, no farther difficulty was experienced. In one instance especially, when the head passed the brim (I was using forceps at the time and had two medical students with me), it came over so suddenly and with such violence, that the husband who was present thought his wife was torn in two. However, she was not injured in the least, and made a good and quick recovery; the child perished.

In reviewing my cases it will be remembered that I succeeded five times with forceps, in delivering live children. They were all small, but all very difficult to deliver. Each time I was astonished that they lived. I am now convinced I would have had less trouble had I turned. In one instance I delivered a child alive by turning after repeated unsuccessful efforts with forceps. Four times I tried the instruments and could not involve the head; but have turned and delivered the children, dead it is true, but delivered.

A serious objection to the use of forceps in all high positions and especially in cases of contraction, is our inability to adjust them in the proper relation to the fetal head, and we necessarily involve the long diameters of the head in the short diameters of the pelvis. While we cer-

tainly can compress the head with the instruments, we cannot do it in the right direction. This is so obvious that it is unnecessary to enlarge on this point. Then the instruments are very apt to slip and injure the soft parts of the mother; again in the high positions it is difficulty to make traction in the proper axes. I wish to state that I am such an advocate for the use of the forceps, that it is often almost impossible to resist the temptation to apply them in slow labors, but the head must be in the cavity of the pelvis, and not at or above the superior strait.

My second reason for preferring version, that given by Dr. Goodell, but first suggested by Sir James Y. Simpson, is briefly this: The fetal ovoid is wedge-shaped; the broadest portion of the wedge is the biparietal diameter; the base of the skull is several lines less, and if not too wide to involve in a contracted pelvis, it is possible to drag the head through and the child survive. The parietal bones will yield to a certain extent, and even become indented without necessarily destroying life. Now in case of flattened pelvis the head of the fetus will enter the superior strait, when we have delivered the body, in the position most likely to involve the short diameters of the head in the short diameters of the pelvis, that is with the occipito-frontal corresponding to the transverse diameter of the pelvis, it is absolutely necessary in these cases to resort to expression to assist the action of the uterus and keep the head flexed. This is especially urged by Dr. Goodell, but it is hardly necessary to mention so obvious a procedure. I suppose all obstetricians invariably resort to this method in breech deliveries.

Now it might be argued that we could more effectually compress the sides of the child's head with the forceps, and thus drag it into the cavity of the pelvis; but even if we could apply them in relation to the sides of the head, we would compress the head laterally instead of in its antero-posterior diameter, and thus make the labor impossible, unless the head was very small.

The third reason that suggests itself to my mind why I

will turn in these cases is this, that it would require a great deal to induce me to perforate a live child's head, while I would have no hesitation in performing embryotomy, when a child has perished. There is such decided difference in the size of the fetal head as is here illustrated by these specimens; the smallest is from a full-time child and measures less than two and a half inches in the bi-parietal diameter, and is as perfect as the larger which measures four inches. Now we have a perfect right to trust that we may have a small head to deal with, and even if the pelvis of the mother is only two and three-fourths inches in diameter at the conjugate of the superior strait, we may hope to deliver by version, and should the child perish in our efforts we will have the satisfaction of knowing that we have given it the best chance we could, and then after it has died, we have no hesitation in removing it by embryotomy.

CASES FROM PRACTICE.

PIN LODGED IN THE LARYNX OF A CHILD TEN YEARS OLD—REMOVED FOUR AND A HALF MONTHS AFTER THE ACCIDENT.

By Charles A. Todd, M. D., *Clin. Prof. Diseases of the Ear and Throat, Missouri Medical College—Aural and Laryngeal Surgeon to St. John's Hospital.*

Effie ——, aged ten years, on the evening of July 15th, 1880, while washing her face, by a sudden and deep inspiration drew into the larynx a pin that she had in her mouth. She felt at the time some soreness and a pricking pain in the region of the larynx, and spit a little blood. A fit of vomiting ensued, and as several pins were found on the floor at the spot, it was concluded that the pin had been ejected. At breakfast (coffee and bread) on the following Sunday, she was seized with a short fit of coughing, and complained again of pricking pain and soreness in the larynx; blood again appeared in the spittle. For a month and a half after this, the child evidently was suffering,

as in swallowing the head made peculiar movements and she would at the same time press the larynx inward with the hand; this she said gave relief.

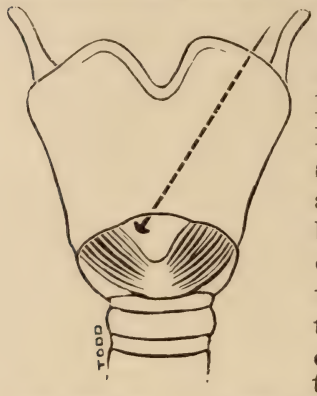
On the Sunday above mentioned, Mr. M. H. Cochran, undergraduate of the Missouri Medical College, made a laryngoscopic examination and discovered the pin, which stood erect, point upward, apparently touching the under surface of the epiglottis in or near the median line and near its tip. Mr. Cochran made use of such forceps as he could obtain, but failed to remove the foreign body. During two months he made frequent attempts at removal but without success, as having seized the pin securely it offered such resistance that he prudently let go rather than run the risk of exerting too violent traction (it will be seen presently that it was fortunate that no such violence was exercised). Since about September 15, no further operative measures were employed; examinations were occasionally made to note the condition. The father had been advised by Mr. Cochran to take his daughter to St. Louis for treatment, but neglected to do so.

In the latter part of August she "took cold" after exposure, and hoarseness resulted, which has persisted with occasional increase even to complete aphonia. During this latter period she complained of pain only in the act of swallowing. Previous to the accident her health had been perfect, she was hearty and robust, but since there has been a marked falling away in flesh, color and appetite.

December 3d, 1880, the child was brought into the clinic for examination: She looked languid, eyes heavy, face a little puffy, complexion sallow, voice slightly hoarse, occasional cough, appetite indifferent. Being very tractable and accustomed to the laryngeal mirror, an examination was made without difficulty.

The pin was immediately seen as a black, linear object rising from the swollen left false cord, inclined backwards and resting upon the left ary-epiglottic fold a little behind its middle point making an indentation. The indentation disappeared during movements of the larynx, as when phonating high e or in gagging. The pin then instantly approached the median line. The epiglottis was considerably swollen and congested; it could not be raised sufficiently to display the anterior angle of the rima glottidis. The left side of the laryngeal cavity was

much swollen and somewhat congested. Owing to these pathological conditions nothing more of the pin could be seen than the part already described, which could be observed to pass directly out of the mucous membrane. Above the point of emergence was a light colored spot, probably pus.



[In the cut here given, the pin is represented in about the position it occupied during quiet respiration. For the sake of distinctness its length has been exaggerated as well as the size of the head. Also the head relatively did not lie so far below the border of the thyroid cartilage, as could be determined through palpation. If drawn in true perspective the point of the pin should not rise quite so high as the upper border of the thyroid during quiet respiration.]

The child's nervous system had become so exhausted and irritable that the slightest contact of the sound, with the interior of the larynx or epiglottis excited violent spasm, which did not pass away after several days rest (from her long railroad journey to St. Louis) during which time the sound was introduced daily. Mr. Cochran had also stated that he thought the pin's head could be felt just below the inferior border of the thyroid cartilage to the right of the median line. This acute observation I confirmed, as in truth there could be felt through the tissues, although very indistinctly, a minute body in this region, which in the absence of any other satisfactory explanation and being apparently in the line designated by the protruding point, I decided to be the pin's head probably buried in the mucous membrane but not far entered into the crico-thyroid membrane. Examining a pin similar to the one in the larynx I found it to be an untinned iron pin with a head *flattened* underneath, thus presenting an abrupt shoulder like the rim of a tin bucket cover. Taking into consideration all these facts, and the father's great anxiety to return home with the least possible delay, I resolved not to attempt the removal by the mouth, but to cut down upon the pin head and thus extract it. If the point should be seized by the forceps and then moderate traction fail to withdraw the pin, the head would

certainly be dislodged and the necessitated extra-laryngeal operation be dangerously altered in nature—instead of a simple incision down to the head, an opening into the larynx would be required. Should sufficient force be put upon the forceps to tear out the abrupt shoulders of the pin, dragging it through the thickened and inflamed tissues, extensive laceration would result and a more or less tedious recovery, besides other obvious and immediate risks.

Operation December 7th, at St. John's Hospital. Present: Prof. T. F. Prewitt, chief of the surgical staff and other surgeons of the corps. The ether was well borne and unconsciousness maintained throughout the operation, which required about twenty-five minutes. After incising through the skin and superficial fascia the pin head could be distinctly felt, but still deeply covered. The skin was incised in the median line and to one side of the pin head, so that after the operation it should slide over the deeper wound and protect it. Tearing through the tissues between the crico-thyroid muscles, the probe presently exposed the head, projecting underneath the deeper fibres of the crico-thyroid membrane; it was seized and fixed with the surgical forceps to prevent its escape. This fixation was immediately followed by spasmodic coughing and retching due to the inclosure of mucous membrane, the forceps were removed and the reflex symptoms ceased. The head was again seized, still more delicately than before, but with the same results. The intervening fibres of the crico-thyroid membrane were now carefully separated down to the metal and the head itself grasped by the tip of the forceps and held until a complete disentanglement was effected, when the pin was withdrawn without perceptible resistance. No signs of laryngeal irritation occurred at the time. The child returned to consciousness quietly. There was no blood expectorated nor any other token of laryngeal injury then or subsequently. The wound was irrigated with carbolic acid solution and closed with rubber adhesive strips. She rested well the following night, and next morning appeared much brighter than before the operation. The hoarseness so long persistent had almost entirely disappeared. A little pain only on swallowing. Epiglottis less congested; swelling on left side of larynx subsided, so that the left vocal chord was seen for the first time; the vocal chords were a little reddened; no cough.

December 9th. Child looks in every respect much better, color in cheeks, eyes bright, puffiness of face absent, no pain felt except at site of wound, and that only on swallowing. The wound healed with suppuration under the skin flap. Case allowed to return home December 13th, six days after the operation, when the intra-laryngeal condition was as follows: No swelling, color of true cords and of the general mucous membrane natural, epiglottis of natural color but still somewhat thickened and so far overlying the larynx that the angle of the rima could not be seen, which I regretted, but was unwilling to proceed to instrumental interference, as the father had already remained in the city longer than had been his wish. The patient, in fact, left before the wound was entirely healed. Subsequent correspondence assured me that all was well and that the operation had proved to be a complete success.

The pin was of iron and untinned, $\frac{12}{16}$ inch long; its head nearly $\frac{1}{16}$ inch in diameter and flat underneath as represented in the cut, its top slightly rounded, the whole head resembling the cap to an iron post. The point was bent over at its extreme tip. Measuring from the point, about two thirds of the length of the pin was more or less deeply corroded, especially towards the point, the third next the head was slightly tarnished. An interesting fact is that the upper bent surface of the point, that looking towards the epiglottis and undoubtedly touching it during certain movements of the pharynx, as in swallowing, was highly polished and thus distinguished from the neighboring corroded parts.

The position of the pin is evidently an extraordinary one. I do not recall a similar case; I have seen a pin with the point sticking in the true cord, head upwards, but that a pin through *internal action* should be thrust through the false cord and present itself point upwards, is most remarkable. As the unlucky inspiration that sucked in the pin, was consequent upon the shock of cold water dashed in the face, it must have been violent and the larynx must have been at its widest dimension, consequently the pin could have lodged crosswise with the head upon the right true cord well forward, and the point slipped under the left false cord, the consequent spasmodic action would naturally force the point upward through the tissues so that it would present as represented in the accompanying cut.

The uniqueness of the case led me to publish this detailed account.

CASES OF CYSTITIS.

BY CARL SCHILLING, M. D., CLINTON, MO.

CASE I. On the 4th day of August, I was called to see Mrs. K., an accomplished lady, who was suffering from agony of pain when emptying her bladder, which she was obliged to do every few minutes. Having been treated for several months by two physicians, she had, as she expressed herself, no hope of getting well. After a very careful examination, together with chemical and microscopical examination of her urine, I found that the bladder was the diseased part, contrary to the views of her prior attendants. The urine contained a great amount of blood and pus, so that the bottom of the vessel was covered almost an inch thick. By digital examination, I found the condition of the womb normal and the walls of the bladder thickened. On inquiry about the history, the patient told me that before her bladder symptoms appeared, she felt a burning sensation in her vagina, scalding on passing urine; and a vaginal flow was noticed.

Then questioning her husband and insisting on the great importance of exactness in the diagnosis, he told me that while attending a festivity in a large city, he had had illicit intercourse and contracted a gonorrhea, which he was not aware of at that time, and so infected his wife after his return.

I then proceeded to wash out her bladder every morning with warm water and afterwards with a solution of sugar of lead, which I continued for ten days, after which I dismissed my patient cured without having given her a single dose of medicine. Of course I kept her in bed all the time while treating her. She is now in perfect health. The instruments I used were a silver female catheter and an old Pollitzer's ear inflator, as I was not in the possession of any more suitable instrument, and by the bye, they answered the purpose quite well.

CASE II. Mrs. E., like the first case, had been treated for several months for kidney disease, before I was called to see her, which was on September 4th. She presented the same

symptoms as case I. Her husband confessed that he had syphilis before he was married, and that he thinks he has infected his wife. She was almost reduced to a skeleton, had a bad sore mouth and throat, and her body was covered with isolated pustules; and there was a purulent discharge from her vagina. Before I could attempt a digital examination I had to give a hypodermic injection of morphine. I found the womb in normal position with ulceration of the neck. I washed out her bladder as in case I, and in a few days the bladder symptoms disappeared; treated the ulcers by injection of a compound iodine wash and put her under mercurial treatment, under which she continues yet. She is quite well, strong and fleshy, so much so that I did not recognize her a few days ago.

Case III, IV and V. Mrs. V., Miss E. and Mrs. G., all three were suffering intensely from cystitis. In case III and IV the womb was normal, in case V was marked retroversion. All these were cured in a few days by washing out the bladder every day and injecting acetate of lead, without taking a single dose of medicine. In Case V, I placed the womb in position and sustained it there by a Hodge's pessary and ordered a vaginal wash of borax and golden seal. All are perfectly well now and no symptoms of diseased bladder has ever shown itself since.

EDITORIAL.

Vol. V. February, 1881. No. 2.

CONDITION OF THE RENAL GANGLIA IN BRIGHT'S DISEASE.

The results of any investigations tending to enlarge our knowledge of the pathological conditions in the various forms of Bright's disease, are of great interest at the present time. If such investigations led on to an understanding of the etiology of this diseased state, their value could hardly be overstated. For some years past students of clinical medicine have

been of the opinion that there was underlying the visible and tangible morbid conditions of Bright's disease, especially the contracting or granular form, a condition of the nervous system that would prove the key to the etiology. We have not space here, however, to even sketch the reasons that have led to this view. No attempt has been made, until very recently, to connect any morbid renal change with an abnormal condition of the ganglia acting in the capacity of nerve-centres to the kidneys. Our knowledge, even of the influence of the nervous system on the functional activity of the secretory cells of the kidneys is very deficient, and we are ignorant of the exact manner in which the renal nerve-fibres terminate in the substance of this organ. In the initial number of the COURIER we called attention to this hiatus in our knowledge, and pointed out the richness of this field of histological and pathological research.

DA COSTA and LONGSTRETH have recently communicated the results of some valuable researches in this direction. They carefully examined the renal ganglia in nine cases of Bright's disease, and the results are published in *The American Journal of Medical Sciences*, for July 1880. Both in respect to the changes observed in the kidneys and the alterations in the ganglia acting in the capacity of nerve-centres to them, the cases are separable into three groups. The first group is made up of two cases of advanced renal cirrhosis. Here, besides the kidney changes characteristic of this form of Bright's disease, they found the renal ganglia had also undergone a marked alteration which corresponded in great measure with that of the glands. The connective basis-substance of these ganglia was apparently undergoing the contractile process with which we are familiar in the kidneys; it had passed the active stage of formation, and its elements were undergoing the degenerative changes. The tissues surrounding the ganglionic masses were found to be similarly affected. The ganglion cells were in the condition usually described as fatty degeneration and atrophy. There was breaking down of their

substance into fatty globules, and into granules, which more or less obscured the nuclei, and even when the nuclei were visible, they appeared to be undergoing the same alteration. The large accumulation of fat so constantly found around the kidneys and in their neighborhood, even when the patient is otherwise considerably emaciated, in cases of renal cirrhosis, is here called attention to for the first time.

In group second, consisting of three cases. the renal changes were similar to those in the preceding one, except that they were less advanced, They were, in fact, cases of the earlier stages of interstitial nephritis, so-called, and in some of them there was evidence of epithelial alteration, but only such as is frequently engrafted on the interstitial disorder. Here, too, the renal ganglia were found to be altered, but not to the same degree as in the first cases. The adipose and connective tissues about the nervous masses, as well as about the kidneys, showed changes similar to those observed in the first group, and the ganglionic cells, though markedly degenerated, were not altered to the same degree as in the first cases. In this second group, the connective basis-substance of the ganglia was found to be filled with cellular elements that had not yet undergone t e contractile process, and in this consists the difference between the two groups of cases. In short, the similarity in the renal and ganglionic changes in the two sets of cases is complete.

In still another, the third group, the renal changes were mainly those of an epithelial character, and were acute and of short duration. Correspondingly, the alterations in the renal ganglia were much less marked, and in some cases so slight as to be hardly appreciable. The connective tissue increase and the accumulation of fat around the ganglia and kidneys were noticeable conditions. In this group the ganglion cells were markedly granular, but the absence of fatty degeneration separates the cases distinctly from those of the first and second groups. The connective tissue basis of the ganglia showed recent hyperplastic alteration.

By these examinations, the authors think they have distinctly connected the renal and ganglionic changes, and have shown that they bear a certain relation to each other. What is this relation? They do not believe that the ganglionic changes are the consequence of the renal disease, for the reason that the alterations in the ganglia are discernible before any other tissues, except the kidneys, are markedly affected. Whether the changes in the ganglia are concomitant or causal, they acknowledge, is hard to answer, but they believe they will be found to be the latter, at least for some of the forms of Bright's disease, especially for contracting kidneys. Speaking with reference especially to this form of kidney disease, they think the course of pathological events is to be interpreted in the following manner: The specific cause, whatever may be its unknown form or character, acts in such a manner on the ganglion cells, presiding as centres of innervation for the kidneys, and whose fibres distributed to the vessels of these organs regulate, not only the calibre of vascular trunks by changing the state of contraction of their muscular fibres, but also, probably, the conditions of osmotic action between the blood and the renal tissues, that the collective phenomena known as Bright's disease are brought about.

Speaking of the cardiac hypertrophy that is a feature of the contracting form of kidney disease, they are of the opinion that this, too, has its cause in an alteration of the ganglia acting in the relation of centres for this organ, though they do not give any results of examinations of these nervous masses. Summing up, they think they have arrived at the following conclusions:

1st. In Bright's disease, especially in the contracting kidney, there exists a constant lesion of the renal ganglia.

2d. Whilst this lesion might be looked upon as forming part of a general process of degeneration, in connection with the kidney disease, they think it is the cause of the renal malady, and precedes the degenerative changes.

3d. That the diseased condition of the ganglia furnishes the clue to the alterations of the vessels of the kidney.

4th. That similar changes producing similar results may exist in other ganglia; for instance, in the cardiac plexus, explaining the hypertrophy of the heart.

While these researches are of the greatest interest and importance, and while a material addition is here made to our knowledge of pathology of renal disease, we believe that the critical judgment of the profession will be, that they do not warrant the wide and sweeping conclusions drawn. If the alterations seen in the renal ganglia preceded the kidney disease, and acted as a cause of it, this influence must have been exerted by virtue of some trophic power on the part of the nerves; and while there are some very good reasons for thinking that trophic nerves exist, it is by no means demonstrated that such is the case. It would be of advantage to the view suggested to show that the ganglia acting in the capacity of nerve-centres to other parts and organs affected with fibrous degeneration, showed changes similar to those described as existing in the renal ganglia, and that parts not so affected had ganglia that showed no alteration. It is pertinent to ask, in this connection, why the cause acting to determine hyperplasia of cellular elements in the renal ganglia, with subsequent degeneration into fibrous tissue, is not sufficient to determine the same changes in the kidney itself, without the intervention of the nervous system in an etiological capacity. What greater reason is there for granting automatism to the connective basis-substance of the renal ganglia than to the tissues of the walls of arterioles, or to the connective tissues of the kidneys? It would seem that, if the views suggested were accepted, the problem would only be transferred from kidneys to ganglia without being robbed of any of its difficulties of solution.

It is, however, to the suggestion made in the fourth conclusion that, we think, the greatest difficulties attach. No examinations of the cardiac ganglia are reported; but it would be in-

teresting to know in what the changes, if any are ever to be found, consist. Supposing they are the same as those observed in the renal, we would have one and the same ganglionic alteration inducing fibrous degeneration, contraction, cirrhosis in one organ, and muscular hypertrophy in another. Supposing the nervous influence to spend itself on the muscular fibres of the arterioles, how, we may ask, can the arterio-capillary changes thus brought about cause cirrhosis in one organ and hypertrophy in another? We venture to believe that it would be easier to connect the ganglionic changes with the polyuria that is such a feature of renal cirrhosis, and possibly with the obscure nervous phenomena of the disease, than with the trophic alterations that constitute its anatomical features.

AINHUM.

Dr. Da Silva Lima, whose name is best known in connection with that curious pathological condition termed by him "Ainhum," and which he was the first to describe in 1867, has recently contributed (*Archives of Dermatology*, Oct., 1880) an interesting paper on the same subject, embodying his latest views and conclusions. He defines ainhum as being a disease peculiar to the African race, characterized by a slow, progressive, fatty degeneration, generally with considerable increase in volume of the toes, especially of the smallest, involving almost all their anatomical elements, resulting from a nearly lineal strangulation, which strangulation is caused by the presence of a narrow strip of contracted and hardened skin, which embraces at first a part, and afterwards the whole of the circumference of the toe, on a level with the digito-plantar fold. This constriction, after the lapse of from four to ten years, forms a deep circular furrow, which determines the absorption of the phalanges and the obliteration of the vessels, with the final and in-

evitable dropping off of the toe, either as the result of accidental injury or gangrene. It is a singular fact that the disease generally localizes itself in one or both of the little toes, simultaneously or successively, and it is only recently that a few exceptions to this rule have been noted.

Ainhum begins by a slight and somewhat less than circular depression, occupying the internal and inferior aspects of the root of the little toe, exactly on a level with the digito-plantar fold. The skin, corresponding to this initial depression, is both thickened and indurated, and, at this period, there is neither inflammation, ulceration nor notable pain present. The limited movements of the digit are preserved. Later it may be noted that the affected toe, if it be the little one, gradually separates itself from its neighbor at the root; but its free extremity tends to incline inward, forming thus an angle at the level of the depression. The digit gradually increases in volume as the cutaneous depression extends all around the superior and external parts of the toe in a circular direction. There is no actual pain in the part, but some slight tenderness upon pressure. When the constricting circle is completed, the formerly shallow depression becomes a deep and narrow furrow, as if produced by the wire of an écraseur, which had buried itself in the tissues. This slow and progressive strangulation of the toe goes so far that finally nothing remains of its attachments to the foot save a short and slender pedicle, which can be made visible with difficulty by separating the margins of the furrow. At the bottom of this latter an ulcerative process is sometimes observed, and again merely the existence of a crust. When ulceration exists, the furrow is moistened by an ichorous and fetid discharge. The adjacent skin becomes rough, while the extremity of the toe increases to several times the natural size, assuming the globular shape of a small potato. The nail remains intact. In the concluding stage of the disease the toe acquires abnormal mobility, and can be inclined to either side or twisted on its axis in either direction. It is in this stage that the first

phalanx has completely disappeared on a level with the furrow. The pain now becomes sharp, and is intensified by movements of the digits. It is generally after this condition has been reached that patients practice or demand amputation as the sole relief from their sufferings. The malady is purely local in its nature, the general health being at all times unaffected. Men are more frequently attacked than women. In the treatment of ainhum the author recommends an incision of the skin perpendicular to the line of the furrow or constricting ring.

Ainhum would seem to be entirely distinct from leprosy. It is said to prevail very commonly on the west coast of Africa. It is encountered in Asia only in Pondicherry, in French India. In South America it is seen in Bahia, Rio de Janeiro and Buenos Ayres only, and then in the person of African blacks; but it is certain, asserts the author, that the disease shows itself equally in all the Brazilian provinces where slavery exists. There is no positive evidence that ainhum has ever attacked the aboriginal Brazilian Indians.

BOOK REVIEWS AND NOTICES.

A TREATISE ON THE DISEASES OF THE EYE. By J. SOELBERG WELLS, F. R. C. S. Third American, from the third English Edition, with copious additions, by C. S. Bull, M. D. 8vo., pp. 884, cloth. *Philadelphia: Henry C. Lea's Son & Co.* 1880. (Through St. Louis Book and News Co.)

The first edition of Mr. Soelberg Wells' excellent text-book was published in 1868. A new ophthalmology, based on the invention of the ophthalmoscope, by Helmholtz (1851), the demonstration of the mechanism of accommodation, by Cramerd and by Helmholtz (1851-3), and the exhaustive study of the anomalies of refraction and accommodation, by Donders (1850 to 1864), had grown up simultaneously with the student life of the author. It had, moreover, been his good fortune to spend the earlier years of his professional life in very close relations

with nearly all the pioneer workers in the new field, and thus to enjoy the best opportunities for seeing and comparing the results of their very fruitful investigations. Joined with these qualifications, he was possessed of rare good judgment, to which he added the training of some half-dozen years as assistant surgeon at Moorfields, of an independent ophthalmic service at King's College Hospital, and a professorship on ophthalmology in King's College. As a result of this exceptional training Mr. Wells was enabled to produce, not only the best text-book on its subject in English, but on the whole, the best text-book of its time. Its success was as great as its merit, and it rapidly passed through three editions in England and two in the United States, and was, I believe, translated into both French and German.

The last edition of Mr. Wells' book was published in 1873, a date sufficiently remote to render a text-book on ophthalmology practically obsolete. Many old opinions and rules of practice have, within that time, been finally condemned and abandoned; promising novelties have been tested, and some have been found wanting, while others have become firmly established; new and important discoveries have been made, and the whole mass of modern additions to knowledge has been more completely digested and assimilated. The text-book of to-day should give the practice and theory of to-day, and should refer to the abandoned views of the past so far only as may be necessary to show that they are of the past and not of the present; it should touch lightly upon the novelties of the recent past so far as they have been found wanting, and should discuss fully those only which have become a part of current practice; finally, the novelties of to-day should receive notice as things still on trial, with, perhaps, a cautious indulgence in prophecy touching their probable or possible future.

The task of revising an excellent old text-book so as to make of it an excellent new text-book is, therefore, by no means an easy one; and in the present instance it would seem to call for a rewriting of the whole work, in order to preserve the orderly arrangement and just balance of parts which constitute one of the chief merits of the original edition of 1868. Since that date the work has been successively overlaid by additions of the author in two editions, and of the former American editor (Dr. I. Minis Hays), in two others; and now we have "numerous and

ive additions * * * * to every chapter of the work, especially in matters relating to pathology and treatment, and a number of new illustrations" besides the large number introduced by the former American editor, while "as few alterations as possible have been made in the original text" or in the successive additions made by the author and by Dr. Hays prior to 1873.

Such a revision or re-editing of Mr. Wells' book as Dr. Bull has given appears to me to be essentially inadequate, and the result necessarily disappointing; as it is, the book contains much obsolete or superseded matter which ought, in the interest of the reader, to have been omitted or greatly condensed, and much other matter which should have been thoroughly re-digested and rewritten. The very numerous additions by the editor are in the main, of very good quality, and justify his claim that he "has conscientiously endeavored to complete the task assigned to him, and hopes that the present edition of the work will be found fully up to date." To follow him into details would carry us too far.

The "new illustrations" are, I believe, all drawn from the large reserve stock of the publishers; some of the older cuts, and several of the newer, are of a character not to enhance the value of any work in which they have recently appeared; a few are positively incorrect or misleading, and should have been suppressed by the American editor.

JOHN GREEN.

PHOTOGRAPHIC ILLUSTRATIONS OF CUTANEOUS SYPHILIS. By GEORGE HENRY FOX, A. M., M. D., Clinical Lecturer on Diseases of the Skin, College of Physicians and Surgeons, New York; Surgeon to the N. Y. Dispensary, Department of Skin and Venereal Diseases; Fellow of the Am. Academy of Medicine; Member of the N. Y. Dermatological Association, the American Dermatological Association, etc. Nos. 1, 2, 3. *New York: E. B. Treat & Co.* 1880.

Influenced by the success of his photographic illustrations of skin diseases, Dr. Fox sometime ago determined to issue a similar series of plates illustrating the no less important features of cutaneous syphilis. The volume will be completed in twelve numbers, embracing forty-eight hand-colored photographs taken from life. We are thus explicit in giving the scope of this projected work, of which we have received the first three numbers because a careful examination of the delineations be-

fore us warrants the highest praise; andwe trust that the author will meet the fullest recompense for the labor and expense of their production. The letter-press is clearly and concisely written.

In the Introduction the author discusses the prevalence of the disease, former investigations, progress during the last hundred years, etc.; then follow chapters on the examination of patients, the stage and course of syphilis, general characters of the symptoms, the transmission of syphilis, and the chancre or initial lesion of syphilis. The first twelve photographs deal principally with the erythematous, pigmentary, papular and papulo-squamous syphilides. The space at our command forbids a detailed description and criticism of the separate plates; but we think that we are quite safe in saying that they are such exceedingly truthful, lifelike portraitures, that they will prove of incalculable service to those who have had little opportunity for clinical study of syphilis. So far the pictures of the syphilides are better executed and truer to nature than the kindred series on the simple skin affections, which was marred by several very poor delineations. We look forward to the "Illustrations of Cutaneous Syphilis" with great pleasure.

W. A. H.

SCHOOL AND INDUSTRIAL HYGIENE. By D. F. LINCOLN, M. D., Chairman Department of Health, Social Science Association. *Philadelphia: Presley Blakiston.* 1880. (American Health Primers.) 16mo., pp. 152. Cloth. 50 cents. (Through the Hugh R. Hildreth Printing Co.)

This little volume, No. XII of the American Health Primers, consists of two parts. In the first part we find chapters devoted to emotional and mental strain, food and sleep, amount of study, exercise, care of the eyes, school desks and seats, a model school room, and ventilation and heating, site, drainage, etc., private schools, colleges, contagious diseases. Dr. Lincoln's opportunities and studies have put him in a position well qualified to write upon the subject treated in this book, and he has handled the subject in a manner that makes the book of interest and value to all. There are many valuable truths herein that should be well considered by teachers and parents and school directors; and old scholars as well may read the book with profit.

The second part of the volume discusses the injurious effects of inhaling dusty and poisonous substances, injuries from atmos-

pheric changes, injuries from over-use of certain organs, injuries from accidents, regulation of hours of labor, and duration of life in various occupations. These chapters are of interest, not only to those actively engaged in such industrial pursuits as are attended with special exposure, but to all who live in large cities where large manufactories are located.

COLD PACK AND MASSAGE IN THE TREATMENT OF ANEMIA. By MARY PUTNAM JACOBI, M. D. AND VICTORIA A. WHITE, M. D. *New York: G. P. Putnam's Sons.* 1880. 8vo., pp. 76. Cloth. $1.25.

This is a reprint of three original articles which have lately appeared in the *The Archives of Medicine.* It is a clinical history of eleven cases of acquired anemia as treated by the cold pack and massage, showing the results and conclusions thereon. Special examination was made as to the quantity of urine voided, and as to the amount of urea therein contained, in order to ascertain whether such treatment assisted in the metamorphosis of these tissues and thus increased assimilation. The facts proved that during and *immediately after* the pack, there was an increase of urine, often double the quantity; the urea increased, but was not in excess when the amount of urine is taken into consideration. The total amount of urine and urea was not changed.

In the results of this treatment they show some failures, but most of the cases show remarkably favorable results—the increase of appetite, the relieved sleeplessness, the reinvigoration of the system, were marked and positive; and they supposed the blood was enriched, because, in three cases menstruation was re-established. They also cite one case where involution of the womb, following pregnancy, was promoted, though in this they acknowledge the assistance of ergot. This work is not as clear as could be desired upon the point whether these modifications of the urine can be accepted as an index to and measure of the benefit to the patient. We know that cutaneous irritation alone does not increase the elimination of urea. It is far from certain whether muscular work depends on the amount of albumen decomposed. Voit, on the one hand, found no urea, while Ranke only found a slight trace of it. Analysis of the first urine passed after the occurrence of hemorrhage shows an increased formation of urea. The urine is only altered in febrile anemia and in anemia due to kidney lesion, but in chronic anemia the urine is not altered in quality.

There is in this monograph much food for thought. We are accustomed to think of the cold pack only as an antagonist to high temperatures; though we have long known that the effect of cold water upon the skin is no mean tonic, that it is a prompt excitor of reflex action, and that cold packs are usually well borne, even by the feeblest of patients. The use of water even internally is a tonic. Ringer says it thus increases both construction and destruction of tissue, and so acts as a true tonic, improving the vigor of mind and body. Fothergill says water washes away the waste matters, and in so doing paves the way for the growth of new material, and that ill health results from too great abstinence from the use of water. In anemia water is replaced most quickly of the component parts of the blood that are diminished; and that the abstinence from its use soon produces acute anemia, was proven, even in the unscientific experiment of Dr. Tanner. We treat anemia only as we appreciate its cause—supply food when there is deficiency, provide albuminates which are the chief nutrients. Where the machinery work needs keeping up, where temperature becomes too low, where the albuminates have to be economized, we have recourse to the salts, fats, sugars, gums, starch and gelatin. In chronic anemia, we use nerve stimulants; and all practitioners have their prescription pencils ready to write iron in some form, but the use of this drug, at best, is empirical. These authors make a valuable suggestion, when they advise to give iron in small and repeated doses, and they might have added that these small doses should be largely diluted with some menstruum, for the iron of the chalybeate springs is thus rendered of more service. There is no condition we meet oftener than the anemic, and there is no disease against which we have to be better armed than anemia; and we are too apt to have a fixed remedy, regardless of the cause of the condition. It is, therefore, a relief to have some one endeavor to wrench the wheel from the rut.

This book is said to be the product of two brains; yet, the early part abounds in the personal pronoun, "I." The leading spirit and mind is the authoress of the Boylston Prize Essay, on "The Question of Rest for Women During Menstruation," and thus she continues to remain the most worthy representative of her sex in our profession; and she, more than anyone else has given the woman movement in medicine a position of

respect and consideration. A suitable companion article to read with this book is the elaborate paper which Dr. A. Jacobi has just read before the County Medical Society of New York, on "Anemia in Infancy and Early Childhood."

P. V. SCHENCK.

CUTANEOUS AND VENEREAL MEMORANDA. By HENRY G. PIFFARD, A. M., M. D. Prof. of Dermatology Univ. of City of New York, etc., and GEORGE HENRY FOX, A. M., M. D., Lecturer on Dermatology in Coll. of Physicians and Surgeons, N. Y., etc. *New York: Wm. Wood & Co.* 880. Second Edition.

The authors of this little pocket manual are among our best authorities in the branches upon which it is written, and this work is well and clearly expressed, and altogether excellent so far as it goes; but, unfortunately, it does not go far enough. We do not think that the unassisted student could learn any thing from its pages; but used as an auxiliary to attendance upon lectures and clinics, the "Memoranda" will undoubtedly prove of much service. We presume that such was the object had in view by the authors. W. A. H.

LECTURES ON THE HUMAN EYE IN ITS NORMAL AND PATHOLOGICAL CONDITIONS. By ADOLF ALT, M. D. [now of St. Louis, Mo.] (With Ninety-five Illustrations by the author.) 8vo., pp. xvi, 208. *New York: G. P. Putnam's Sons.* 1880.

The author truly says that "a book treating systematically of the histological conditions of the pathological human eye, whose execution and price would allow it to be of use to every one interested in this subject, has been to this day a want often felt." It is equally true to say that this want has been well supplied in the modest volume whose title I have just quoted.

Dr. Alt is one of the first living authorities in this department of medical science, and his book, in its German edition, ranks with the best. There is no ophthalmologist in America who would presume to criticise its well-considered statements of facts, and there is not one who may not study it with profit, and refer to it often for instruction.

From beginning to end, on every page of the text and in every one of the the ninety-five original wood cuts, we see the work of an original, careful and honest investigator, who makes no statement that he has not verified by his own independent observations, and expresses no opinion for which he has not the same positive justification.

The scope of the book is limited strictly to the eye-ball itself,

the author promising to treat the accessory parts at some later period. This we can only hope that he will do at as early a date as may be, consistently with the demands of ophthalmic practice.

No synopsis of the contents of such a book can be of any value; the book itself is a necessity to every ophthalmic student.

John Green.

BOOKS AND PAMPHLETS RECEIVED.

How a Person Affected with Bright's Disease Ought to Live. By Joseph F. Edwards, M. D. *Philadelphia: Presley Blakiston.* 1881. Small 12mo., pp. 83. Cloth, 75 cents.

Medical Heresies Historically Considered. By G. C. Smythe, A. M., M. D., etc. *Philadelphia: Presley Blakiston.* 1880. 12mo., pp. 228. Cloth, $1.25.

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis. By Frank Clowes, D. Sc., Lond. With Illustrations. From the Third English Edition. *Philadelphia: Henry C. Lea's Son & Co.* 1881. 12mo., pp. 372. Cloth, $2.50.

Drainage for Health, or Easy Lessons in Sanitary Science. By Joseph Wilson, M. D., Med. Dir. U. S. N. *Philadelphia: Presley Blakiston.* 1881. 8vo., pp. 68. Cloth, $1.00.

A Manual of Diseases of the Throat and Nose. By Frank Huntington Bosworth, A. M., M. D., etc. *New York: Wm. Wood & Co.* 1881. 8vo., pp. 427. Cloth.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By Geo. M. Beard, A. M., M. D., and A. D. Rockwell, A. M., M. D. Third Edition, revised by A. D. Rockwell, A. M., M. D. With nearly Two Hundred Illustrations. *New York: Wm. Wood & Co.* 1881. 8vo., pp. 758. Cloth.

A Treatise on the Principles and Practice of Medicine. By Austin Flint, M. D., etc. Fifth Edition, revised and largely rewritten. *Philadelphia: Henry C. Lea's Son & Co.* 1881. 8vo., pp. 1150.

A Manual for the Practice of Surgery. By Thomas Bryant, F. R. C. S., etc. Third American, from the Third Revised

and Enlarged English Edition. Edited and enlarged by Jno. B. Roberts, A. M., M. D., etc. With Seven Hundred and Thirty-five Illustrations. *Philadelphia: Henry C. Lea's Son & Co.* 1881. Large 8vo., pp. 1005.

(All the above through the Hugh R. Hildreth Printing Co.)

Soluble Compressed Pellets. A New Form of Remedies for Hypodermic Use. By H. Augustus Wilson, M. D. Reprint from *Philadelphia Med. Times.*

Adenoid of the Rectum—Extirpation—Recovery. By Frank J. Lutz, A. M. M. D., St. Louis. Reprint from the *St. Louis Med. and Surg. Jour.*

Atresia of the Genital Passages of Women. By Edward W. Jenks, M. D., LL. D. Reprint from the *Chicago Med. Jour. and Ex.*

Objective Points in the Treatment of Phthisis. By Wm. Porter, A. M., M. D., St. Louis. Reprint from the *Medical Herald.*

The Surgical Treatment of Intestinal Obstruction. By W. M. Briggs, M. D., etc. Reprint from the *Nashville Jour. of Med. and Surg.*

Genital Irritation, together with some Remarks on the Hygiene of the Genital Organs in Young Children. By Roswell Park, A. M., M. D. Reprint from the *Chicago Med. Jour. and Ex.*

Constitution and By-Laws of the St. Louis Medical Society of Missouri. *St. Louis: Davis & Freegard.* 1880.

The Asylums of Europe. By George M. Beard, A. M., M. D. Reprint from the *Bost. Med. and Surg. Jour.* Cambridge: Printed at the Riverside Press. 1881.

Phthisis Pulmonalis and its Treatment by the Hypo-Phosphites. By L. de Brémon, M. D. *New York: John Newton.* 1880.

Proceedings of the Louisiana State Medical Society at its Third Annual Meeting, 1880. *New Orleans.* 1880.

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, A. M., M. D. Nos. 4, 5 and 6. *New York: E. B. Treat.*

A Clinical Study of Papilloma Cutis. By W. A. Hardaway, A. M., M. D., St. Louis. Reprint from *Archives of Dermatology.*

TRANSLATIONS.

PROFESSOR PASTEUR ON CHICKEN CHOLERA.

(*Communication to the Academy of Medicine, at the Session of October 26, 1880.*)

Of the various results which I have had the honor to communicate to the Academy in regard to the affection sommonly called chicken cholera (*choléra des poules*), I take the liberty of recalling the following: 1. Chicken cholera is a malady virulent among the first. 2. Its virus consists in a microscopic parasite, which is easily multiplied by culture away from the bodies of the animals which the disease may attack. Hence, the possibility of obtaining the virus in a state of perfect purity, and the irrefutable demonstration that it is the sole cause of the disease and death. 3. The virus affords variable degrees of virulence. Sometimes the disease is followed by death; sometimes, after having provoked symptoms of varying intensity, it is followed by recovery. 4. The differences which are determined in the power of the virus are not only the results of observations upon natural facts; the experimenter can induce them at will. 5. As it takes place, in general, with all virulent diseases, chicken cholera does not relapse, or, rather, the relapses which occur are in an inverse ratio to the greater or less intensity of the first attacks of the affection, and it is always possible to push preservation so far that the inoculation of the most virulent virus produces no more effect. 6. Without wishing to affirm anything at present as to the relations of the variolous and human vaccinal virus, it is apparent, from the preceding facts, that in chicken cholera there exist conditions of the virus which, relatively to the most virulent virus, perform the office of human vaccine relatively to variolous virus. The vaccine virus, properly so-called, causes a benign disease, vaccinia, which protects from a graver malady, variola. Likewise, the virus of chicken cholera presents states of attenuated virulence which cause the disease and not death, and with such conditions that the animal, after recovery, can brave inoculation with

a very virulent virus. The difference is great, however, in certain regards between the two classes of facts, and it is not useless to note that, in relation to knowledge and principles, the advantage is on the side of the studies of chicken cholera. For while there is still question as to the relations of variola and vaccinia, we have the certainty that the attenuated virus of chicken cholera is derived from the very virulent virus peculiar to that disease; that we pass directly from the first to the second virus; in a word, that their fundamental nature is the same.

The time has arrived for me to explain myself as to the capital assertion which makes the basis of the most of the preceding propositions, namely, that there exist variable states of virulence of chicken cholera: a strange result, surely, when we think that the virus of that affection is a microscopic organism which one can treat in the state of purity as one treats the yeast of beer or the mycoderm of vinegar. And yet, when we consider coolly this mysterious quality of variable virulence, we are not slow to perceive that it is probably common to different species of this group of virulent diseases. Where, indeed, is the unicity in one or other of the scourges which compose this group? To cite only one example, do we not see very serious epidemics of variola alongside of others almost benign, without the differences being attributable to exterior conditions of climate or of constitutions of individuals affected? Do we not see as well the great contagions become less and less to reappear later and increase anew? The notion of the existence of variable intensity of the same virus is not calculated really to surprise the physician or man of the world, although it is of immense interest that this be scientifically established. In the particular case which occupies us the mystery appears especially in this circumstance, that the virus, being a microscopic parasite, the variations in its virulence are at the mercy of the observer. This it is which I was to establish rigorously.

Let us take, for a point of departure, the virus of the cholera in a very virulent state, the most virulent possible, if we may say so. Heretofore I have made known a curious means of obtaining it with this property. It consists in collecting the virus in a chicken that has just died, not with the acute but with the chronic disease. I have made note that the cholera presents itself sometimes in this last form. The cases of it are

rare, although it is not very difficult to find examples of it. In these conditions the chicken, after having become very ill, emaciates more and more, and resists death for weeks and months. When it dies, which takes place a little while after the parasite, hitherto localized in certain organs, has passed into the blood and been cultivated there, we observe that whatever has been the original virulence of the virus at the moment of inoculation, that which is taken from the blood of the animal that has taken so long a time to die, is of considerable virulence, which ordinarily kill ten times in ten, twenty times in twenty.

This granted, let us make successive cultures of this virus, in the state of purity, in chicken broth, taking each time the seed of one culture from the preceding culture, and trying the virulence of these different cultures. Observation demonstrates that this virulence does not change in a sensible degree. In other terms, if we admit that the two virulences are identical when in acting under the same conditions upon the same number of animals of the same species, the proportion of the mortality is the same in the same time, we shall prove that, for our successive cultures, the virulence is the same.

In what I have just said I have passed in silence the duration of the interval from one culture to the other, or, if you choose, the duration of the interval from one sewing to the following, and its positive influences upon the successive virulences. Let us fix our attention upon this point, however small may seem its importance. For an interval of a week the successive virulences are not changed. For an interval of two weeks, the same result. For an interval of a month, of six weeks, of two months, we observe no more change in the virulences. Still, in the measure that the interval increases, we believe that we seize sometimes certain signs of little apparent value as an enfeeblement of the inoculated virus. For example, the rapidity of death, if not the proportion in the mortality, undergoes delay. In the different inoculated series we observe chickens that languish, very sick, often very lame, because the parasite, in its propagation through the muscle, has attacked those of the thigh; pericardites are prolonged; abscesses appear around the eyes; finally, the virus has lost its startling (*foudroyante*) character. Let us, then, go beyond the aforesaid intervals before taking up the cultures anew. Let us extend their duration to three, four, five, eight months or more before

studying the virulence of the developments of the new microscopic being. Then the scene is entirely changed. The differences in the successive virulences which hitherto were not apparent, or were apparent in a doubtful manner, manifest themselves now by considerable effects. With such intervals in the plantings it occurs that, on the resumption of the cultures in the place of identical virulences, that is to say, of a mortality of ten chickens in ten inoculations, we find descending mortality of nine, eight, seven, six, five, four, three, two, one in ten, and sometimes even the mortality is absent, that is to say, the malady is manifested upon all the subjects inoculated, and all recover. In other words, in a simple change in the mode of culture of the parasite, in the single fact of extending the epochs of planting it, we have a method to obtain progressively decreasing virulence, and finally a true vaccinal virus, which does not kill, gives the benign disease, and preserves from the fatal disease. It is not to be supposed that in all these attenuations affairs take place with a mathematical fixity and regularity. Such a culture which awaits its renewing for five or six months may show a virulence still considerable, while others of the same origin will be already greatly attenuated after three or four months of delay. We shall soon have an explanation of these anomalies which are only apparent. Often there is like a sudden leap from a virulence still very great to the death of the microscopic parasite, and with an interval of short duration. In passing from one culture to the following we are surprised by the impossibility of all development; the parasite is dead. The death of the parasite is, moreover, an habitual and constant circumstance whenever we allow a sufficient time to pass before the cultures are resumed.

And now the Academy knows the true motive of the silence which I have preserved, and why I have claimed the liberty of a delay before informing it of my method of attenuation. Time was an element of my researches.

In the course of these phenomena, what becomes of the microscopic organism? Does it change in form, in appearance, by changing in virulence in a degree so marked? I would not dare to affirm that there do not exist certain morphological correspondences between the parasite and the diverse virulences which it effects, but I must avow that it has been hitherto impossible for me to seize them, and that if they really

exist, they disappear before the eye armed with the microscope, by reason of the exceeding minuteness of the virus. The cultures are alike for all the virulences. If we think sometimes that we perceive slight changes, they soon seem to be only accidental, for they are effaced or are produced in an inverse manner in new cultures. What is worthy of remark is, that if we take each variety of virulence as a point of departure of successive new cultures made at near intervals, the variety of the virulence is preserved with its own intensity. If, for example, it be an attenuated virus which kills no more than one in ten, it maintains this virulence in its cultures if the intervals of the planting are not exaggerated. Another interesting fact, although it is in a general sense in the preceding observations, is, that an interval of sowing which suffices to an attenuated virus to perish, respects a more virulent virus, which can be attenuated by it anew, but which does not necessarily die.

At the point where we have uow arrived an important question presents itself, that of the cause of the diminution of the virulence. Cultures of the parasite are necessarily made in contact with the air, because our virus is an air-living being (*un être aérobie*), and apart from the air its development is not possible. It is, then, natural to ask, in the first place, if it would not be in the contact of the oxygen of the air that the enfeebling influence of the property of virulence resides. Might it not be that the little organism which constitutes the virus, remaining abandoned in presence of the oxgen of the pure air, in the medium of culture where it is multiplying itself undergoes some modifications which will show themselves permanent when the organism is withdrawn from the modifying influence. We might, it is true, ask further if some principle of atmospheric air other than the oxygen, some chemical principle or fluid, may not intervene in the accomplishment of the phenomenon whose incomparable strangeness authorizes every supposition. It is easy to comprehend that the solution of this problem, to the extent that it relates to our first hypothesis, that of the influence of the oxygen of the air, is quite easily accessible to experiment: if the oxygen of the air, in fact, is the modifying agent of the virulence, we shall be able, probably, to have the proof of it by the effects of the suppression of its presence. To this end let us make our cultures in the fol-

lowing manner: A convenient quantity of chicken broth being planted with one very virulent virus, let us fill some glass tubes two-thirds or three-quarters full; then let us seal these tubes. By means of the small quantity of air left in the tube, the development of the virus commences, a circumstance which is manifested to the eye by an increasing turbidity of the liquid; the progress of the culture causes all the oxygen contained in the tube to disappear little by little. The turbid matter then falls, the virus is deposited upon the walls and the culture liquid clears up. Two or three days are necessary to produce this effect. The little organism is protected from contact with oxygen, and it remains in this state as long as the tube is not opened. But what will take place this time as to its virulence? For greater certainty in our study, we have prepared a large number of similar tubes, and simultaneously a like number of flasks of the same culture, but freely exposed to contact with pure air. We have stated what occurs to these cultures exposed to contact with the air; we know that they experience a progressive attenuation of their virulence. We shall not return to this. Let us speak only of the cultures in closed tubes away from the air. Let us open them: one after an interval of one month, and after having made a culture by planting a portion of its contents, let us try the virulence of it; another after an interval of two months, and so on for a third, fourth, and other tubes after intervals of three, four, five, six, seven, eight, nine, ten months. It is here that I am arrested for the present. It is remarkable—experiment proves it—that the virulences are always like that of the commencement, like that of the virus which served to prepare the closed tubes. As to the cultures exposed to the air, they are found dead, or having the very slightest virulence. The question which occupies us is then answered: it is the oxygen of the air which weakens and destroys the virulence.

Probably there is here more than an isolated fact: we ought to be in possession of a principle. We should hope that an action inherent in atmospheric oxygen, a natural force, always present, will show itself efficient upon other viruses. It is, in every case, a circumstance worthy of interest that the possible great generality of this method of attenuation of virulence derives its virtue from an influence, in some sort, of cosmic order. May we not presume henceforth that it is to this influ-

ence that it is necessary, in the present as in the past, to attribute the limitation of great epidemics?—*L'Union Méd.*, Nov. 9, 1880.

REPORTS ON PROGRESS.

SURGERY.

A Celluloid Nose.—Dr. V. Blum, a dentist in Bamberg, has modeled a celluloid nose for a patient who had lost that organ in consequence of lupus. Thiersch had attempted to relieve the deformity by rhinoplasty, but failed on account of the absence of nasal cartilages. A model was taken of the parts in plaster of Paris and then a wax nose fitted to the model. This was copied in celluloid, and silver canulæ adjusted to keep open the nasal passages. The celluloid nose is attached by a little hook to a pair of spectacles and is so comfortably adjusted that the patient does not remove it except when necessary to cleanse it twice a day.—*Memorabilien*, Aug., 1880. *N. Y. Med. Rec.*, Dec. 25th.

Partial Intoxication as a Preventive of Shock.—Stephen Smith, in a recent clinical lecture, presented a patient for operation in whom a condition of partial intoxication had been purposely induced in order to obviate the shock from the effect of the operation. His attention was drawn to the subject some years ago by observing that patients who undergo serious injuries, while in a state of partial intoxication, do not suffer from shock as do those who sustain similar injuries when sober. He first induced this condition, purposely, as preparatory for an operation, in a young woman of peculiarly susceptible nervous temperament, upon whom it was necessary to perform an amputation of the foot on account of caries. The operation had been twice attempted and abandoned on account of the impossibility of bringing her safely under the influence of an anesthetic, either choloroform or ether. It was determined to give her stimulants for several hours before the operation until decidedly intoxicated. The result was entirely successful. A very small

quantity of ether brought about anesthesia; and there was no disturbance of respiration or circulation during the operation nor afterwards, and the recovery was very prompt and satisfactory.

Dr. Smith recommends this use of stimulants, giving one, two or three ounces, according to the condition and habits of the patient, every hour for five or six hours before the operation is performed, in the case of patients of susceptible nervous temperament and with those with an enfeebled condition of the heart and noticeably overloaded with fat.—*N. Y. Med. Record*, Dec. 25, 1880.

Bullet in the Brain for Sixty-five Years.—Robert Elliot, of Carlisle, reports the case of a soldier who was shot in the left eye at the battle of Waterloo in the month of June. He fell and was reported dead by the man who stood next him when the wound was received. However he rejoined the regiment at Paris and being unfit for duty was sent to England. Dr. Elliot saw him for the first time thirty-three years after the wound was received and after careful examination could find no evidence that the ball, which was said to have entered the left orbit, had made its exit from the cranium. Moreover, the man described sensations in the lower back part of the head which could be accounted for only on the supposition of the presence of a foreign body. This man died October 10th, 1880, sixty-five years after the bullet was lodged in his brain.—*Edinburgh Med. Jour.*, Dec., 1880.

Morphia and Chloroform.—Alexander Crombie calls attention to the observations of Claude Bernard on the effect of morphia in prolonging the anesthetic effects of chloroform. His attention was called to the matter in 1873 by reading a report of these observations; and he has since then tested the practical value of the discovery in surgical practice. He finds a much smaller quantity of chloroform necessary to secure anesthesia than when the morphia is omitted, and the anesthetic effect is much more prolonged. This last feature is of special value in making operations about the face and mouth.

Vomiting is much less frequent; and chloroform asphyxia has occurred but once in the administration of chloroform to six hundred patients when morphia has been administered hypodermically before the chloroform. In his practice among

the native Hindoo population, he finds one-sixth of a grain of morphia sufficient. Probably a somewhat larger amount would be necessary in treating Caucasians.

In the administration of chloroform, he uses a metal cup with a perforated bottom and a piece cut out of the side to fit the nose. The chloroform is sprinkled upon a piece of sponge which is placed in the bottom of the cup. In this way a free admixture of air with the chloroform vapor is secured.

As soon as the induction of the anesthesia renders it possible, he causes the condyles of the lower jaw to be thrown forward out of the glenoid cavity on to the eminence in front, thus preventing the occlusion of the glottis by carrying forward the root of the tongue and the hyoid bone.

Two New Anesthetics.—Dr. Edward Tauber, Privat-Docent in the University of Jena, brings forward two new anesthetics which he has tested on animals and upon his own person. These substances are named respectively monochlor-ethylidenchloride or methylchloroform, and monochlor-ethylenchloride. They both have an odor similar to that of chloroform; the specific gravity of the first is 1.372 and its boiling point is 167°F. The second has a specific gravity of 1.422 and a boiling point of 239°F.

In experiments with the first one, Dr. Tauber found that with frogs and rabbits, anesthesia was produced rapidly and completely with no disturbance of circulation or respiration. Complete anesthesia of nineteen minutes' duration was produced in a dog of 10 or 12 pounds weight by a dose of forty to fifty drops. The respirations were increased in frequency; the pulsation scarcely varied. He himself took about twenty grammes (five drachms), administered by Dr. Von Langenbeck. In five and a half minutes complete anesthesia was produced which continued for ten minutes. "There was no stage of excitement; respiration was quiet; the pulse 84, regular and good tension." He vomited shortly after returning to consciousness, having eaten breakfast only a couple of hours before taking the anesthetic; and for perhaps an hour afterwards he had some sense of *malaise;* but after that had no further uncomfortable sensations. The monochlor-ethylenchloride, in doses of a few drops, produced anesthesia promptly and thoroughly in rabbit, pigeons, guinea-pigs and frogs, while the frequency of pulse and respiration was very little diminished. In dogs weighing 10 to 14

pounds, anesthesia was produced in three to seven minutes, lasting eleven to nineteen minutes, by doses of thirty to fifty drops.

Experiments with the latter substance on man had not been made at the time of the report in the *British Medical Journal* from which the above notes were taken.

Reduction of Old Dislocation of Humerus.—A case of dislocation of the humerus of long duration was recently reduced at the Albany Hospital. The patient, a man 70 years of age, living in the country, fell, striking on the elbow, while the arm was extended. Dislocation was recognized, and attempts made, which were supposed to be efficient, to reduce it, by local physicians. He was afterwards treated for rheumatism, neuralgia and paralysis of the arm.

January 6th, 1881, he was seen by Dr. Coffin, of New Concord, who recognized the true condition and brought him to the hospital next day. He was a large, vigorous man, quite muscular for his age. Examination showed a forward dislocation, under the coracoid process. The deltoid was atrophied, but the other muscles of the arm were well developed. The part was kept under warm fomentations for two or three days, and on the 10th instant, attempts at reduction, before the medical class, were made, by Dr. Van Derveer, aided by Drs. Ward, Mosher, and Hailes. He was brought well under the influence of ether; then a clove hitch being attached to the arm, steady traction was made downwards, whilst the arm was rotated freely, to break up adhesions, counter-traction being made by a long towel under the axilla in addition to the heel. The arm was then carried well across the body, but without result. Traction was then made outward, at right angles to the body, rotation being repeated, and after this manipulation for some time, it was again brought across the chest. A third attempt at traction, again downward, the head of the bone being strongly manipulated at the shoulder as well, resulted in carrying it into the glenoid cavity. The dislocation had existed 143 days.—*Med. Annals*, Jan., 1881.

OBSTETRICS.

Rupture of Perineum—Angus Macdonald, in the Report of the Royal Maternity and Simpson Memorial Hospital, for the quarter from February 1st to April 30th, 1880, states that of 31 primiparæ, 14 had more or less laceration of the perineal body; 6 of them severe laceration. This gives a proportion of 45 per cent. for the primiparæ. In the 26 multiparæ 4 distinct lacerations occurred. In one of these the tear went back an inch, and required to be stitched. The immediate operation was performed in every case, where the laceration was at all extensive, with successful results, save one, where union failed completely.—*Edinburgh Med. Jour.*, August, 1880.

Vomiting of Pregnancy—Goodell often prescribes the following:

R.	Ceriti oxalat.,	gr. j.
	Ipecacuanhæ,	gr. j.
	Creasoti,	gtt. ij.

M. Sig. To be taken every hour.—*Med. Gaz.*, July 24, 1880.

Sick-Stomach of Pregnancy—W. S. Forwood has for twenty-five years, and more, prescribed with gratifying results the following:

R.	Rad. columbo,	
	Rad. zingiber, *aa*	℥ss.
	Fol. sennæ,	ʒj.
	Aq. bullient.,	Oj.

M.

Infus. Sig. A wine glass before each meal.

When the infusion has been about half used it may be filled up to the original quantity by adding a half pint of boiling water.

He generally prescribes two packets of the recipe to be taken continuously, and generally finds this sufficient. In case the trouble returns after three or four weeks, the treatment may be repeated. The bitter taste of the infusion is very disagreeable at first, but they soon find it less objectionable. He has never seen but one case which failed to be benefited by it.—*Md. Med. Jour.*, July 15, 1880.

Inhalations of Oxygen in the Vomiting of Pregnancy—M. PINARD reports a case of vomiting in pregnancy in a young woman who had gone to the fourth month, and who had emaciated considerably. Opium internally, subcutaneous injections of morphia, and pulverizations of ether had accomplished nothing. He then caused her to inhale oxygen—ten litres the first day, twelve the second and fifteen the third. After that time there was no return of the vomiting and the pregnancy went through successfully to term.—*Annales de Gynecology.*

Muriated Tincture of Iron in Puerperal Fever—CHARLES BELL commends emphatically, in puerperal fever, the exhibition of the tincture of the muriate of iron of the Edinburgh pharmacopeia, full doses, frequently repeated. He thinks that it has effect to purify the blood. It is specially, in the form of the disease which is associated with the prevalence of erysipelas. He gives thirty drops every two hours. He lays great stress upon the Edinburgh preparation as superior to the others.—*Edinburgh Med. Jour.*, July, 1880.

False Pregnancy—DR. ARVO relates the following: A girl of nineteen ran off with a lover, was gone for a few days, and returned to forgiving parents. A short time afterwards, symptoms of pregnancy appeared—sickness, aversion to food, etc. With these symptoms, the menstrual flow ceased, followed by an increased size of the abdomen. Appetite returned; and gradually, swelling of the feet and ankles appeared. During the ninth month, pains came on, and, suddenly there was a discharge of a large quantity of hydatids, weighing eight pounds and nine ounces, which was not followed by either lochial discharge or swelling of the breasts.—*Revista Med. Cirurg.*, *Va. Med. Mo.*, Aug. 1880.

Dressing for the Navel—DORHN recommends that after the new-born child is washed in the usual manner, the remains of the navel string and the parts around the navel be washed with a $2\frac{1}{2}$ per cent. solution of carbolic acid. The cord is then tied a second time with a ligature which has been duly carbolized, and the superabundant portion of the navel string is cut off. A layer of carbolized wool is applied over the stump of the navel string, and over all a portion of sticking plaster, about the breadth of the hand, is firmly fastened. This dressing is allowed to remain till the seventh day without being

either aired or renewed. On removing it then, the remains of the navel string will be found either nearly or entirely separated. In the former case it is cut off with scissors. He says that he has used this dressing satisfactorily in twenty-eight cases.—*Centralblatt für Gynakologie*, Nov., 14, 1880. *Edinburgh Med. Jour.*, Sep., 1880.

Acidity of the Utero-Vaginal Mucus as a Cause of Sterility—M. Charrier calls attention to a cause of sterility that has been little known. He says that in some women, who are in perfect health, sterility is caused by an acid mucus which is fatal to the spermatozoids. To relieve this condition, he has used successfully an alkaline treatment, (alkaline drinks, alkaline baths, warm alkaline injections).—*L' Union Med.* Sept., 1880.

E. M. Nelson.

Relations of Goitre to Pregnancy, etc.—Edward W. Jenks, after a careful study of goitre in its relations to pregnancy and derangements of the female generative organs, presents the following conclusions:

1st. There is indisputable evidence that there may be endemic and occasionally epidemic causes producing goitre in men as well as women, yet the evidence is equally indisputable that every form of goitre occurs among the latter in a much larger proportion than among the former.

2d. The fact has long been established that in certain occult conditions of women, increased vascularity and enlargement of the thyroid gland may be produced as a consequence of some unusual excitement of the generative organs.

3d. Violent parturient efforts may cause the vascular form of goitre, but under the influence of pregnancy there may be gradual enlargement of the thyroid gland lasting for years; while, on the contrary, a goitre produced by one pregnancy is sometimes cured by a subsequent one.

4th. There are reasons for believing that, when goitre is caused by any disorder of the generative organs (excepting pregnancy), it is due more commonly to functional than to structural causes.

5th. It is not as a consequence of phlegmasias, or malignant diseases of the uterus or its annexes, that goitre is developed; on the contrary, the disorders which more commonly cause or precede goitre are fluxions, congestions, functional diseases of

the pelvic organs, or those disorders of menstruation which are of systematic origin.

6th. As many goitrous necks among women are due solely to some derangement of their generative organs, the use of topical applications or remedies, however administered, unless made use of to remedy the cause, will be of no avail, and constitutes irrational and unscientific treatment.

7th. In the prognosis of goitre we should always bear in mind the possible complications when the tumor is of considerable size; prominent among which are compression of the trachea, leading to dyspnea, or even dysphagia, and compression of the recurrent laryngeal nerve, producing harshness of the voice, and sometimes aphonia.

8th. When the goitre is not large and is manifestly dependent upon some derangement of menstruation, some functional uterine affection, or has suddenly developed in consequence of pregnancy or violent efforts in labor, the prognosis is favorable, although it is not certain that there will be a rapid disappearance of the deformity.—*Am. Jour. of Obstet.*, Jan., 1881.

Fatal Burns in Advanced Pregnancy—Burns on the Mother Impressed on the Child in utero.—WM. HUNT reports a case in which a woman in the ninth month of pregnancy was severely burned by her clothes taking fire. She was well developed and bore no evidence of having had specific disease. The fetal sounds were very distinct but excessively rapid. They were heard repeatedly up to noon of the day following the accident. At two o'clock these had ceased. At 5.20 labor came on and at 6.30 a well-formed but dead female child was born. The mother died two days later. The remarkable fact in this case is that the child was apparently blistered and burned in extent and places almost exactly corresponding to the injuries of the mother. The blisters were fresh and full and in some places the derm was deeply involved, as on the mother.—*Am. Jour. of Med. Sci.*, Jan., 1881.

THERAPEUTIC REVIEW FOR 1880.

As usual, a very considerable number of new drugs and preparations, as well as the revival of many old favorites, require to be mentioned. Thus, pulsatilla has been recommended for dysmenorrhea, and for the headache of exhaustion; the rinacanthus communis for ringworm; and muscarin (*amanita muscaria*) for night-sweats in phthisis. Resorcin appears to possess decidedly antiseptic properties; but both the amount of excitement which it produces and the briefness of its effect are drawbacks to its general adoption in treatment of fever. Fuchsin, in doses of one to three grains in twenty-four hours, has been found to reduce the amount of albumen in some cases of Bright's disease. The oxalate of cerium in the cough of phthisis, bronchitis, pertussis and other conditions has proved useful chiefly as an indirect, but probably also as a direct, pulmonary or respiratory sedative. Benzoate of soda, which last year received its *coup de graee* as a remedy for phthisis, has lately been praised in the treatment of whooping-cough, scarlet fever, diphtheria and gonorrheal ophthalmia. On the other hand, it is claimed that good results have followed the administration of crude petroleum (in capsules) in chronic diseases of the lungs. Chloride of calcium appears to have been used with benefit in some forms of phthisis. Caffein, in the form of citrate, has been proved to deserve a trial as a diuretic in cardiac dropsy, if other measures fail. Whatever may be the value of pyrogallic acid in the treatment of scaly diseases of the skin, it certainly must be used with caution, as the application of it to an extensive surface has caused death in at least one instance by dissolution of the blood corpuscles. Quebracho bark maintains its good character as a remedy for dyspnea from pulmonary or cardiac disease, and in spasmodic asthma. The action of the nitrites of sodium and potassium has been quite recently investigated in America and Germany, and the results appear to show that in these drugs we possess remedial agents which at once possess many of the most important properties of nitrite of amyl, and are more gradual and persistent in their influence.

As an antiseptic, boracic acid has been recommended by certain Continental and American authorities; benzoic acid by others; a solution of acetate of alumina has been highly recommended in Germany, both for its activity and for its cheapness; and the salts of copper are said to possess the same properties by Dr. Burq. Another claimant for trial and attention as an antiseptic has been brought forward in Edinburgh in menthol, a crystalline solid derived from the essential oil of peppermint; and this substance is said to be also "anti-neuralgic."

Of Chian turpentine, it must be said, with regret, though certainly without surprise, that it has proved in the hands of the most trustworthy observers to be utterly valueless as a "cure" for cancer, and to have seldom any influence over a single symptom of the disease.

Nitro-glycerine has been found to be a drug of real value in many, although naturally not in all, cases of angina pectoris; and there is considerable evidence in favor of its use in sea-sickness. Jaborandi and its active principle pilocarpin have been tried without more than very moderate success in hydrophobia; with small success in perspiratory disorders of the skin, psoriasis and acute eczema; and with more encouraging results in prurigo, chronic urticaria, chronic eczema, various forms of asthma, in myxedema and in Bright's disease. It appears, also, to act occasionally as a useful galactogogue. From America we hear that the hypodermic injection of pilocarpin has proved to be of great value in the paroxysm of ague, when given immediately before the attack, or in the cold stage; and it is alleged that when the incipent symptoms are thus checked, the malarial disease may be actually relieved for a time, whether with or without the administration of quinine in the intervals. The stigma of the maize has been highly spoken of in France as a diuretic and sedative to the genito-urinary tract, especially in calculus.

Gelseminum has come into more general use during the year in the treatment of the acute periods of neuroses, especially of neuralgia and megrim. Bromide of ethyl has been employed both as a general and as a local anesthetic, but unfortunately not always with success, or even safety. Iodide of ethyl has been highly praised as an anti-spasmodic in asthma.

During the year a considerable number of cases have been reported in which ergot has appeared to be of benefit in diabetes

and diabetes insipidus. A new mydriatic, called homatropin, has been introduced, which promises to be equally certain in its action on the eye with atropin, and at the same time less irritant, whilst its effects pass off more quickly. Professor Ladenburg, of Riel, has proved that the alkaloids called hyoscyamin, daturin and duboisin are identical with each other, and isomeric with atropin, into which they may be converted.

Acupuncture, which seems lately to have fallen into comparative disrepute, has been re-introduced to the profession as a really valuable remedy for neuralgia by Mr. Snell. At the same time many important instances have been recorded during the year of the unquestionable effect of the application of pieces of metal, wood and other substances to the surface of the body in hysteria and hystero-epilepsy; and the intelligent therapeutist will do well to hesitate before he discards this method of treatment as imaginary and useless.

Various preparations of petroleum, etc., which do not require to be particularized, have been introduced as rivals of vaseline; and the use of these bodies as a basis for ointments instead of animal fat is rapidly extending.

Probably the greatest triumph of the year in the whole range of treatment is the peptonized food as recommended by Dr. Roberts, of Manchester, in gastric, intestinal, and wasting diseases of all kinds.—*Med. Times and Gazette,* Dec. 25, 1880.

Accidental and Sudden Dislocation of the Liver, with Recovery.—Dr. Alexander V. P. Garnett reports the only case of sudden dislocation of the liver, apparently, on record. A lady aged fifty, while stooping down hurriedly to pick something from the floor, "felt a sudden wrench or giving way on the right side." Examination revealed a displaced liver reaching to the crest of the ilium. Much discomfort was experienced, but the patient was relieved by spontaneous reduction, which occurred in the space of three days. A week's confinement to bed, followed by a broad elastic band around the waist, constituted the further treatment.—*Am. Jour. Med. Sciences,* Jan., 1881.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, November 17, 1880.—Dr. Boislinicre, President, in the Chair.

Dr. Yarnall gave an abstract of the paper read by him at the previous meeting. (See page 101.)

Dr. S. G. Moses—Mr. President: I think cases of deformed pelvis are unusual in this country. At least that has been my experience, and I have had very few opportunities of coming to a positive conclusion in these cases. I think, however, that when the pelvis is contracted to 2 1-2 inches at the superior strait, turning will be usually found impracticable. I think turning in contracted brim is, perhaps, better than the forceps, because I take the application of forceps here to be a very difficult matter, for two reasons: First, from the difficulty of fixing the blades on the head, and secondly, from the difficulty, even if you are successful in the application, of making traction in the proper direction. To some extent this is remedied by the new forceps of Tarnier, as they permit the application above the superior strait with much more ease than does the ordinary instrument, and you can make traction in the line of the axis of the superior strait. But it is at best a difficult matter to apply the forceps above the superior strait, and it is a dangerous operation. I don't doubt that it is a more serious one than turning.

Again, it is sometimes a very difficult matter to estimate, with the fingers, the amount of contraction occurring; for instance, there may be an angular form of the symphysis pubis, but which to the touch gives quite a long diameter. In these cases of deformity I believe it is the best plan to adopt the *Cesarean section*, or one of its recent substitutes, as it gives a better opportunity to save the life of the child, and I doubt very much whether it is not for the mother a safer operation, under extreme circumstances, than either turning or embryotomy.

I consider it also of importance to use the appropriate hand, according to the fetal position and condition of uterus. The necessity of having the palmar aspect in contact with the abdomen of the child will, according to its position, especially in a contracted uterus, that is, after the evacuation of the liquor amnii, render a choice of hands important, in order to facilitate seizing the foot, and by traction in the proper fetal line flex the body; the foot, it has been said, may, without this precaution, be dragged over the back and rotation be forced in such a way as to occasion a dislocation or fracture of some portion of the spine; and Dr. Yarnall reports such accidents in his own practice. Where the contraction leaves only space of 2 3-4 inches, it must be a very small head that can be made to pass by any means short of craniotomy—3 inches being the ordinary limit for forceps or version.

Dr. Papin—Mr. President: Dr. Moses said that where the head of the child was high up above the superior strait, in the cavity of the uterus, it was, probably, more proper to turn. I cannot distinguish the application of his remarks, that with the modification of the forceps, it was much more easy to apply them in this position than the ordinary instrument which we have been accustomed to use. I would like to ask the gentleman if he knows of a forceps that can be easily applied above the superior strait? I have never been able to find them, if he has. The President will remember the case of a lady we saw together. You had just received a pair of these forceps, and we both tried to apply them for a long time, until we became convinced the child was dead, and we used the crotchet.

Stated Meeting, Dec. 16, 1880.—Subject of Discussion of Previous Meeting Continued.

Dr. Yarnall—In referring to the subject of turning, Dr. S. G. Moses suggested the idea that I had broken the neck of some children by pulling the children backwards. I would state that I believe, when the uterus is well contracted, it does not matter which hand is used; introduce the hand, seize a foot and pull upon it, that is my idea of turning; if the uterus is well dilated, before the water is expelled, I can imagine it *might* be possible to so manipulate the foot as to sweep it over the back

of the child; but this must be a very rare occurrence, and I consider the directions given by the text-books on that subject useless. If you pull upon a foot, it comes in the proper direction naturally. It is only necessary to seize one foot. In several instances I have gotten a foot down, and pulling upon it have gotten the head down at the same time, and in these cases I have secured the foot with a loop and pushed the head up into the uterus, and in that way I have succeeded in turning, when I had almost given it up. I make this statement because the subject of turning was brought up, and I want to put myself on record in relation to it.

Dr. Engelmann—Mr. President: Every one here has delivered oftener than I have, but the idea of using either hand indiscriminately is a novel one to me. I must say that I have been taught great caution in regard to that, and it has never struck me, perhaps, that caution was unnecessary. I am almost inclined to believe Dr. Yarnall is correct. There is one point, however, with regard to which I certainly think he is wrong; that is, that you should introduce the hand and seize either foot, it makes no difference which. Now, I am very careful as to which foot I seize, because I think, in certain cases of difficult labor, it is preferable to seize one foot and not both. I think that is decidedly preferable. *Secondly*—It makes a great difference which foot you seize, because you can determine in which one of the transverse axes the head will be delivered by seizing the proper foot. We are speaking, as I understand, of contracted pelvis, and in those cases it is of importance to know the direction of the occiput, and we can determine this by the foot we seize; hence, I think that, especially in this class of cases, it is important for us to seize the correct foot. In a symmetrically contracted brim I don't know that it would make any difference which foot is seized; but in an irregularly-contracted brim, with more space on one side of the median line than on the other, it would make a difference. I don't know whether it would make any difference in which direction you draw the foot of the child. Very likely Dr. Yarnall is right that you cannot draw the foot in the wrong direction; that is, you cannot drag it back over the child. I don't know with regard to that. It is the first time I ever heard it mentioned. It strikes me it is correct.

Dr. Maughs—The question is whether the forceps presents an advantage over version in case of symmetrically contracted brim of not less than 2 3-4 inches. It will usually make but little difference whether one or both feet are brought down, or which one is selected. Ordinarily it is a good rule to endeavor to reach the foot opposite the presentation, that is, if the feet are to the right side, take the left foot and vice versa. I agree with Dr. Yarnall that the question of breaking the child's back by pulling the foot backwards, is of no importance; it would be a very difficult thing to do.

I think the doctor wrong in disregarding the selection of the hand; if he should introduce the right hand in certain positions, he would find it impossible to give it the proper twist in order to seize the foot and bring the child into the necessary position. In occipito-anterior positions, the patient on her back, the left is the proper hand. Where the pelvis is under 3 inches, a normally developed head cannot be passed without great and uncommon effort; in fact, it is not to be expected, either by forceps or version.

Dr. S. G. Moses—With reference to the remarks upon the possibility of breaking the child's back, I think it is possible, if you use the wrong hand. It is certainly possible if you pull the child backwards, which may certainly be done, if you use the wrong hand; and I think it possible that Dr. Yarnall did it in that way, for I hardly imagine that he would persist in such efforts to draw the child through after he had delivered the arms and shoulders as to occasion the accident.

Dr. Boisliniere—In reference to this matter, I suppose each one will choose what he considers the easiest way, and I would prefer the more simple expedient—the forceps. As a rule, my practice under these conditions, is different from Dr. Maughs', but with the head at the contracted brim, it is difficult to make traction in the proper direction with the ordinary forceps, impossible with the straight ones, without endangering the perineum. The forceps of Wallace is a step in the right direction; that forceps has a very strong pelvic curve, and traction with this curve may succeed in delivering the child when it is impacted between the sacrum and the pubis. In dragging down with the ordinary forceps the perineum is almost certain to be lacerated. Wallace's forceps enable us to draw backwards without endangering the perineum. It is like the German for-

ceps with a greater pelvic curve, and with it the hand is made the fulcrum of the lever. With regard to version, it is a slow and a dangerous operation.

Dr. Prewitt—I would like to ask Dr. Boisliniere how he would apply the forceps in delivery at the superior strait?

Dr. Boisliniere—Very obliquely.

Dr. Barrett—I have been very much interested in this subject which has been gone over so thoroughly, that there is not much left to be said. I doubt very much though, whether an ordinary head can be safely delivered through a diameter under three inches, either with forceps or by turning, because when the child's head is compressed as much as possible without injury, it will measure three inches, and it cannot yield further without killing the child; but if the head is a little under the size, or if the fetus is a little more plastic than usual, it is possible to deliver either with forceps or by turning, through a diameter of three inches. As for the rules for turning and for discriminating between the proper hand to be used in the different positions. they have been so well laid down as not to require further notice. I think that Dr. Moses, in commenting on Dr. Yarnall's breaking the necks of those children, suggested that he should have used forceps. I think this an error.

Dr. Moses—My object was to argue that if force had to be used in extracting the child, it was better to diminish the size of the child's head with the forceps than to risk breaking the neck.

Dr. Barrett—I don't know that there is much difference whether you break the child's neck or crush its skull. A great deal of force can be used in dragging the head through without injury to the mother. The head may be crushed by compression and the skull fractured without injury to the mother. I think the feet are a better means of traction than the forceps.

Dr. Coles—I think, Mr. President, there are cases in which Dr. Barrett would find that he might run a risk, not only of breaking the child's neck but of actually leaving the head in the uterus, if he used a great deal of force. Such force has been used by some very distinguished obstetricians, and the head has been left in the uterus. A very distinguished man in this country, I believe, attempted to deliver a child's head in that way. He broke the child's neck, the head separated from the body and was left in the uterus. It was a very disastrous

accident—that woman lost her life in consequence of it. You will remember, Mr. President, a case in which each of us attempted to deliver a woman with forceps and failed, after which version succeeded. In that case the membranes had been ruptured a long time, and the pelvis was contracted at the brim.

Dr. Barrett—I want to say here, that in pulling the feet or forceps, I have a right to assume that a due amount of discretion is used; of course I might pull the child's head off, or pull the woman in two, if I employed enough strength. I am not assuming any such thing.

Dr. Boisliniere—I had such a case. I pulled by the feet and the head came off and the body came away. The woman recovered.

Dr. Ford—Mr. President: Would it not be practicable to use the dynamometer under such circumstances? It might be possible to know and limit the exact amount of traction used in a particular case. It might be possible to adopt something of the kind to determine how much force can be used when necessary to deliver by version or forceps.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Nov. 22, 1880.

PRURITUS VULVÆ RELIEVED BY IODIDE OF POTASSIUM.

Dr. Bryson related the following case: Having under treatment a patient suffering from fistula in ano and urethral stricture, he learned, as a part of the history of the case, that the man had syphilis, and gave him constitutional treatment with potassium iodide while he was dilating the stricture.

Not long after he was called to treat the wife of this patient for most intolerable pruritus vulvæ. The general condition of the woman seemed to be very good, but she had been married seven years without bearing any children, and had once aborted

in the third or fourth month of pregnancy. These facts, in connection with his knowledge of the husband's history, led the doctor to suspect a syphilitic taint in the woman; and he prescribed potassium iodide in doses of three grains three times a day, which was gradually increased to ten grains three times a day. No local treatment was used, and in three days the distressing pruritus entirely disappeared. The iodide was continued for some weeks longer with marked improvement of the spirits and health of the patient.

There was no eruption or other lesion characteristic of syphilis apparent about the vulva of this patient, and Dr. Bryson considers that the trouble was due to an obscure syphilitic nerve affection.

Dr. S. G. Moses said, with reference to the doses of iodide of potassium to be used in treating syphilitic affections, that he had in one case given 480 grains in twenty-four hours.

Dr. Bryson, on the other hand, stated that he had reported, several years ago, a number of cases in which he had had admirable results from what seemed to be ridiculously small doses of this drug, even as small as one-twelfth of a grain.

Dr. Carson had a patient who could take no more than one-half grain doses.

Dr. Briggs suggested that the influence of the heroic doses of mercurials and the iodide of potash given at Hot Springs had probably had an effect upon the prevailing fashion in medicine of giving large doses of these drugs.

Dr. Bryson quoted the case related in Van Buren and Keyes' work on Venereal, in which two ounces a day of iodide of potassium had been taken during eleven days.

Dr. Hodgen had had a patient who took an ounce and a half a day until the amount reached nine pounds. There was no derangement of the digestive organs. In one case, where nearly the whole calvarium had been destroyed, the patient grew fat under these large doses of potassium iodide.

Dr. Gehrung had met several cases where half a grain of potassium iodide would produce coryza and other symptoms of iodism. In these cases small doses effected a cure.

Dr. Hodgen said that Bulkley pays no attention to the occurrence of coryza, and finds that that unpleasant symptom soon ceases.

Dr. Bryson would pay little attention to the coryza, but would

watch indications of affections of the stomach and nervous system.[1]

Dr. Carson considers that the comparative activity of the skin and kidneys in different patients largely determines the degree of susceptibility to the action of iodide of potassium.

Stated Meeting, December 27.

Dr. C. A. Todd reported an interesting case in which he had removed a pin from the larynx of a child (*vide* p. 106).

Dr. W. P. King, of Sedalia, being present, gave to the Society a short account of his personal experience in obstruction of the bowels. Three years ago, after some imprudence in eating, he was seized with a sudden, very intense pain a little to the right of the median line in the epigastric region. This pain persisted for four or five days, and was only dulled, not obliterated, by large and repeated doses of morphia, used by hypodermic injection. It was several weeks before he recovered from the effects of this attack. A few months later he had another attack, and from time to time others of less severity than the first. These attacks were generally induced by some indiscretion in eating, especially if associated with exhaustion or loss of sleep. There was no heartburn, generally no nausea. On one occasion, when there was nausea, he found noticeable relief from emesis, induced by drinking warm water; and he obtained more decided relief from drinking water as hot as he could swallow it than from any other means.

A few weeks ago, having been up all night with a case of labor, he ate some apples, and soon after was seized with the same pain of increased severity. He took a hypodermic injection of morphia, which somewhat allayed the pain. He had three loose evacuations, and took pills of aloes, belladonna and nux vomica.

Various opinions had been formed as to the character of the affection. Some had considered the attacks to be simply acute indigestion; some thought that the attacks were associated

1 He says that he believes that the nervous depression is the chief characteristic of iodism, and is the element of the affection that should be specially watched.

with the passage of gall-stones, and the character and location of the pain made that theory a plausible one. However, his friend, Dr. Evans, and himself were satisfied that the symptoms indicated an obstruction; and, as there was no indication of inflammation, he took two compound cathartic pills, and the next morning one compound cathartic pill, followed by a bottle of citrate of magnesia. The effect of this was to secure fifteen evacuations, averaging a pint each, which seemed to him to resemble fragments of sandstone in tar, and the odor of which was extremely offensive. He felt very much prostrated, suffered severely, and in the absence of Dr. Evans, two other physicians were called in. They directed injections and opium. Three days passed without any more evacuations; he felt worse than before; there were no symptoms of peritonitis, enteritis, or any other *itis*, and, with the approval of Dr. Evans, he determined to attempt the loosening and evacuation of the obstructing mass. Accordingly he took repeated doses of Epsom salts and cream tartar, the effects of which kept him pretty busy for twenty-four hours. He then took opium and had the first comfortable night's sleep that he had enjoyed for a long time. The size of his abdomen, which had been quite prominent, was much reduced. He confined himself to a diet of milk and toast for a some days, and had no more very serious symptoms, though for two weeks after he was up and about, he would occasionally be awakened at night by severe pain, and there were occasionally passages of the peculiar character already described. He is satisfied that in cases of similar character to his the proper treatment is such as last pursued, viz.: the administration of such cathartics as produce watery evacuations, thus tending to facilitate the breaking down of the mass of accumulated fecal matter.

REPORT OF BOARD OF HEALTH COMMITTEE ON AN UNUSUAL FORM OF FEVER.

St. Louis, Jan. 17, 1881.

To the Honorable Board of Health:

Gentlemen:—The undersigned, a committee appointed to take charge of all replies by practitioners of medicine to the Circular of Inquiry of Nov. 13th, issued by the Health Commissioner relative to a form of continued fever observed in this City during the past autumn and summer, and inviting an expression of opinion thereon, beg leave to report as follows:

About 500 circulars in all were sent out and 68 responses thereto were received up to Jan. 1st. Of this number 28 were returned accompanied by a statement to the effect that no cases of the fever of which information was sought had been seen; or that the informant, being engaged in a special line of practice, had not the opportunities for observation, such as a general practitioner enjoys. In a few instances the circulars were returned entirely blank.

All the replies were referred to your committee, who have carefully sifted, compared and collected the statements, statistics and facts containsd therein.

Of the whole number returned forty were found to contain information bearing on the febrile disease in question and of greater or less value according to the care with which they were filled out, and the clearness with which the object of the inquiry was kept in view. With regard to the object, it may here be stated that the circular was framed with the design to elicit information that would serve to throw additional light on the somewhat obscure question of the proper etiological classification of the form of disease referred to in the circular. In other words, to aid in the differential diagnosis of perhaps indistinct or covert forms of malarial disease and that which resembled typhoid fever in its nature. The questions accompanying the circular were so drawn that the answers thereto might help to make plain this point, and possibly clear up existing doubts as to the real nature of the disease to which atten-

tion was invited. The gist of the inquiry was to ascertain, if possible, its causative influences and its characteristic symptoms, (if such existed) so that if found necessary, such preventive measures as might seem possible could be adopted by the health department, and the outline of a basis of rational treatment created for the profession at large.

Referring to the report, we find that more or less complete data relating to nearly 200 cases are given which have occurred since last June. In some instances the clinical history is not perfectly rendered, important points being overlooked; but in many, the course of the febrile movement from inception to close is clearly sketched and a graphic picture presented. The number of cases observed or treated, reported by individual practioners, varies from one to sixty-five, and of the whole number given, but five deaths are noted. In no instance is mention made of an autopsy having been held, nor is the mode of death indicated, though the inference is drawn that the disease induced a profoundly adynamic state which was the immediate precursor of death.

With regard to the symptomatology of the disease as pointed out in the answers, there is a variety of expression; though a majority describe the prodromic stage as insidious in its character, being usually one of general malaise, lassitude, vague pains, chilliness, languor, loss of appetite, while in some cases the premonitory symptoms are referred to as being those of malarial remittent fever. The attack was usually ushered in by chilliness, or by a chill more or less well defined, which was succeeded by a fever of a continued type, which showed in most cases a higher temperature in the evening than in the morning, the diurnal variation averaging from 1.5° to 2°. Several careful observers report a temperature early in the disease of 106°, and one states that later it "oscillated very much like typhoid fever at a corresponding period, but the fever curves were steeper." The pulse was always accelerated, and the statement is usually made that it was soft and compressible, though not always. The tongue was more or less thickly coated with whitish, yellow or brownish fur, and usually with a considerable tendency to dryness, sometimes becoming fissured, and with a deposit of sordes on the teeth and lips. The abdomen was generally distended, and more or less tender or painful; while the bowels were nearly always confined at the begin-

ning and during the early part of the illness with later a tendency to looseness. A roseolar eruption *(taches lenticulaires)* was observed in quite a number of cases, not always distinctly, but of a more or less fugitive character, while much more rarely miliary eruptions and petechial spots were present. A peculiarity sometimes noticed and commented upon was the lack of uniformity of the symptoms, their great variability, and, indeed, instability.

As to the nomenclature of the malady, there is a variety of opinions expressed, and it is not unusual in the reports to find reference to the difficulty experienced in making a satisfactory diagnosis. It is variously spoken of as "epidemical specific typhoid fever;" as being veay similar to "typhoid fever;" as "typhoid fever without abdominal complications;" as "genuine ileotyphus," notwithstanding its chameleonic symptoms; as "remittent fever," and as "malarial catarrh." One obsearver speaks of it as being typhoid only in the sense of being of a low and slow grade, but that it lacks the pathognomonic symptoms of true typhoid—that is, involvement of the intestinal glands. Others speak of the disease as "approaching the typhoid form," as assuming a "typhomalarial type of the severest kind," as "typhoid remittent," as "abortive typhoid," as "mild typhoid fever," as resembling "gastric fever," as "typho-malarial fever," as "catarrhal fever," as an "unusually low and obstinate form of typho-malarial fever," as "a mild type of typhoid fever," as "typhoid pneumonia," as very "similar to typhoid fever," as undoubtedly "typhoid," as a "fever of a remitting type," as a "nervous disease," as being a "hybrid" disease called "typho-malarial fever," "enteric fever," as "bilious typhoid fever," as "plain typhoid fever," and as "continuous fever." One speaks of some cases as having "marked typhoid symptoms, others slightly so," and regards the disease as undoubtedly due to atmospheric changes. Another attributes the disease to evolved gases resulting from decomposition of organic matter; one ascribes it to decomposition of sewage from nonflushing of the sewers and the "consequent poisoned condition of the atmosphere early in the season from the course pursred by the Water Commissioner, or those responsible for preventing the so-called waste of water." Another finds it due to bad sewer gas or like cause, while still another could almost universally connect the disease with improper drainage. One

observer attributes the disease sometimes to well water, another to the continued dry season, while a small number express opinions to the effect that more or less malarial influence had something to do with its causation. Several call attention to the great tendency to relapse shown by the disease, and a majority state that it prevailed chiefly among children of all ages and adult females.

From the imperfect data given it is difficult to fix exactly the duration of the disease; but a comparison of the statements made on this point showed that the average would probably be from fourteen to twenty-eight days.

The treatment resorted to was various; but that which seems to have been attended with the most satisfactory results was the expectant plan, i. e., as little active medicine as possible.

The circular having been designed to draw out information on that point, the use and value of antiperiodics and antimalarials in the treatment of the fever is touched upon in nearly every response received, the cinchona bark and its salts being the drug chiefly used, and quinine being the form commonly employed; it is thus referred to by the different observers: "Antimalarials caused improvement only at the beginning, later an increased derangement of the stomach," this physician thinking he recognized a malarial intercurrent affection during the course of typhoid fever. Another says: "Quinine did no good except when the skin was moist," when it seemed beneficial. Another says: "Quinine was of no avail;" another, "Quinine did not act very well, on the contrary aggravated the disease;" and still another, "Quinine in large doses was not efficient to break up or cut short the disease." One practitioner states that from his observation "Quinine was never more frequently required than in the past two years;" another, that the "disease would not yield to remedies appropriate to remittent fever;" another, "Bark preparations seemed hurtful, especially in the earlier stages;" another that "Antimalarial remedies were not successful;" another that the "Quinine treatment did some good; it did not break up the fever but lessened the severity." Again, "Quinine was of no avail in the early stages, though when the remissions became marked it seemed to check it." A practitioner who reports sisty-five cases, says, "Quinine, although tolerated, did no good;" another says he "tried antimalarial remedies to no purpose;" another remarks that "Quinine was

sometimes useful in antipyretic doses, that severe cases were mitigated by the same;" another, "Quinine seemed to do no good;" another, "The temperature was influenced by antiperiodics, but the disease was not cut short;" another, "Quinine is not admissible as a general thing;" while another says he "found quinine useless," although at first he supposed he was dealing with a malarial trouble.

It will be seen from the varied nomenclature employed that the term "typho-malarial fever" is the one most frequently used to designate the collection of morbid phenomena which makes up the disease; and it may not be out of place here to inquire as to the origin and legitimacy of the designation thus used. The name is not recognized in transatlatic medical literature, and was first made use of during the late war to describe a very prevalent camp disease occurring particularly in the army of the Potomac during the Chickahominy campaign, due to or largely influenced by the triple factors of malaria, crowd-poison and scorbutus. The pathological views on which it was founded are now admitted by its originator, Dr. J. J. Woodward, of the regular army, to be erroneous and that it has no true basis in morbid anatomy, the anatomical criterion being inflammation and ulceration of the Peyerian patches of the ileum, which is simply the pathognomonic lesion of true typhoid fever. Formal acknowledgement of the error was made by Dr. Woodward at Philadelphia in 1876 before the International Medical Congress. (Bartholow's Practice of Medicine, p. 705.)

The term alone is a hybrid, malarial disease and typhoid fever not being congeners, no engrafting from one stock to the other is possible; and hence, true hybridization is out of the question. While they they are not antagonistic in their nature, yet they are alien and uncongenial, and tend to prevail under essentially different conditions—a malarial district being *per se* non-typhoidal and *vice versa*.

According to the researches of the latest competent observers, malarial disorders are due to minute vegetable organisms developed under certain conditions of soil, heat and moisture; while typhoid fever is admittedly the result of putrefactive changes in excretal organic matter; and the disease may almost be termed an enthetic one from the fact of its occurrence by intestinal infection or inoculation.

The elicited fact that quinine did not avail to cut short the

form of fever under consideration, and was useful as an antipyretic rather than as an antiperiodic, throws light on its nature, and the further almost concurrent expression of opinion that children and women suffered most, who are manifestly least exposed to malarial infection, are confirmatory of the opinion that the real cause of the disease was typhoidal in its nature. The very decided lessening of dothinenteric symptoms and morbid accidents goes to show that it was a mild expression of the specific poison of that disease. The record of deaths in this city from typhoid fever and "typhus fever" for the past fourteen years shows in the main a declining series; and although it would at present be an oversanguine expectation to anticipate an entire effacement of the disease; yet it has locally been shorn of many of its threatening features and very much of its fatality.

In seeking for the cause of the typhoidal manifestations, mild though they were, the circumstance of midsummer and autumnal drought must be taken into consideration in connection with a study of the sewerage system of the city, the rainfall of those seasons being infrequent and less in amount than usual. As the causation of typhoid fever is, by the best authorities, ascribed to the night-soil emanations or sewage decomposition, the question as to the desirability of relying on the flushing of sewers by storm water is one of importance in this connection, though the subject is too extensive for full consideration here.

It is not an unwarrantable deduction that the experience of the past warm season goes to show that an epidemic of typical typhoid fever of perhaps characteristic fatality would probably have prevailed had not the seeds of the disease lodged on a soil made comparatively barren even in the absence of frequent rains for sewer flushing, by improved drainage works, as the meteorological conditions seemed favorable to its development. Nor is it going too far to say that the danger from diseases due to sewer exhalations has approached the minimum here through natural and acquired advantages of site, soil, and, in the main, intelligent construction of drains. Though the type of the disease was greatly modified and the impression generally indistinct, yet the view that it was other than benign or mitigated typhoid fever seemed untenable from the determinings of the therapeutic touchstone and other facts before adduced. That

such a notable lessening of the severities of a once malignant disease is anywhere capable of achievement gives encouragement for the future; and as an eminent authority says: "Should drainage succeed in decreasing the number of typhoid cases, * * * the still youthful science of hygiene would boast of a brilliant triumph."

Respectfully submitted,

[*Signed*] W. B. Conery, M. D.,
Jos. Spiegelhalter, M. D.,
Members Board of Health.
Geo. Homan, M. D.,
Chief Sanitary Officer,
Committee.

SELECTIONS.

INSANITY IN AMERICA.

This augmentation of the numbers of the insane, and this development of novel symptoms and forms of insanity, are most notably seen among the English speaking people. Insanity is a part of the cost of liberty; it is a tax on our freedom, that so many must be deprived of their freedom. In the great despotisms there is little need of societies for the protection of the insane; where the sane are all oppressed, the number of the insane has never been very great. The Czardom of Russia oppresses its subjects, but does not make them crazy, and the Turks, with all their weaknesses, are mostly sane. England, the spawning ground of empires, sends out her children through all the earth, carrying with them both the seeds of liberty and nervous disease. Liberty implies responsibility; responsibility leads to worry, and worry is always attended with disappointment. Out of the throes and agonies and manipulations and calculations of the last month, two men have been nominated for the supreme office of this nation, to the disappointment of thousands upon thousands of candidates, their followers and friends. A solid despotism and established religion are partly

redeemed by this—that they keep the asylums empty; if we think for ourselves and govern ourselves, thousands must go down in the struggle. Nature knows nothing of disinterested benevolence; she never gives anything; she may often trust for a time, but sooner or later we have got to pay, principle and interest. As a philosopher has said, all progress is in waves—a motion without any advance. * * * *

Like witchcraft, like astrology, like alchemy, the delusion that disease of the mind is something separate from the body, lingers all along our hill-sides and in the valleys, and even on the mountain-tops of our civilization; men run from an insane person as from one possessed of an evil spirit. *This Society (National Association for the Protection of the Insane) will have justified its existence if it shall succeed in doing nothing but this—in obtaining universal recognition of the fact that it is no disgrace to be crazy.* Through all the avenues of information we are to seek for light on this problem—how to prevent insanity, how to reduce to a minimum the friction of modern life. The London critic, to whom I have referred, reminds us that, when the steam engine was introduced, it was supposed it would do all the work of the world and allow us to be idle; whereas, it has increased the world's work, and helped to increase nervous disease. This society will have justified its existence if it shall succeed in making it no longer discreditable to be manfully idle. A century ago, the problem was how to make everybody work; to-day, the problem is how to keep people from overworking; the children of the last generation were goaded and spurred into study; the children of this generation must be checked and restrained—kept back—held in from study. The details of the reform which is now beginning in the methods of education, belong in part to this society; in England, even more than in this country, at this very hour all these questions are raised and asked, and pressed with more force and persistence than here.

I close with three or four suggestions of a general character, that will apply not only to this organization, but to all organizations that have for their object the well-being of mankind.

First of all, we should beware of unintelligent philanthropy, that is, doing good at short range, relieving present evils by increasing those that are to come. No form of human energy so often fails in its purpose as philanthropy. Among the

wisest words ever uttered are these: "Charity creates much of the misery that it relieves, but it does not relieve all the misery that it creates." Philanthropy in excess becomes cruelty, and, with a force and success that no tyrant can rival, heightens and deepens the miseries of mankind; doing good is easily turned to doing evil, and present distresses, when relieved, but enrich t e soil out of which other and more terrible distresses are to arise.

A second suggestion is, that we do not depend too much upon law. Even in monarchy, laws cannot be very far ahead of the people, and in a republic they are but the expressions of the wishes or fancies of the majority. The enacting of laws, therefore, even those most necessary and imminent, as those that relate to the central governmental supervision of the insane, may be among the last stages in this advance on the subject of insanity. We are in the habit of running to the law and burying our heads in it, and crying like children whenever we are in trouble, forgetting that legislators are themselves but children, whom we, the people, are to educate and command. The principle of central supervision of the insane by government is to prevail on this continent from the Atlantic to the Gulf, but not until thousands of messages have gone forth among the people, as so many school-masters, to train them to desire and ask for, and appreciate, such legislation.

Finally, we are not to look for the completion of our labors as soon as they are begun. All nature is but a process of preparation; results are but means to higher results; nothing is final and complete; what we call preparation may be far more useful than the end for which we prepare.

In all organisms, each layer of growth is the pathway for a higher growth; our very reformations need themselves to be reformed, and the consummate issue may flash out suddenly after long and hopeless delay. We bury the seed, the plant breaks through the surface, a huge trunk is developed that sends its branches farther and higher, and clothes itself with richer and richer foliage, year by year, and the buds appear; but, as yet, no fruit or flower; we go away for a night, and on our return our barren tree is alive and eloquent with blossoms.

In these United States of America, it requires on the average from five to fifteen years for a new and unpopular truth, if it have

practical relations, and be wisely engineered, to become old and popular. Those whose faith will allow them to wait for a decade, will see this movement, begun in doubt and gloom, pass into and through the early twilight into the clearness and glory of the morning.—*From Address of Geo. M. Beard, M. D., before National Association for Protection of the Insane.*

NATURAL BONE-SETTING.

The career of the Italian bone-setter, Regina Dal Cin, who has just returned to her native hills after a triumphal year of residence in this country, is like a bit of the surgery of a past age, revived from its sleep of a hundred years, to give us a demonstration of the manner in which surgery was divided into fragments, and illiterate specialists itinerated from place to place seeking occupation. The stone-cutting expeditions through Europe of Friar Jacques strongly resemble the bone-setting journeys of Madame Dal Cin to Vienna, Trieste and America. Even the record of the dirty monk that "most of the Parisians looked upon as a physician sent from heaven for the relief of mankind," is equalled by the claims for a special heaven-endowment made for the illiterate peasant woman. A native of an obscure village in the north of Italy, the daughter of an innkeeper, without education, unable even to read in her own language, self-instructed, she has acquired such tact and facility in the manipulation of joints, which have been the subject of chronic diseases, that in selected cases she has been able to accomplish most excellent curative results. Her local reputation in Italy attracted the attention of an officer of high rank in the U. S. Navy, who took his child, the subject as was believed of an incurable joint-disease, to her for treatment. The child having been greatly benefited, the case became the occasion of a highly wrought article descriptive of the powers of the *manipulatiste*, from the pen of the father, in one of the most popular magazines. A wealthy and influential family in Brooklyn, one of whose daughters was crippled from spinal and joint affections, attracted by her reputed powers, took their daughter to Italy and placed her under the care of this person, and eventually persuaded her to return to this country with

them, where her stay was prolonged more than a year. Her arrival was heralded by long articles written by a clergyman, and published in the daily papers in which her supposed wonderful, mysterious, and God-given gifts of bone-setting were set forth with all the details which a vivid imagination and a good command of adjectives made possible. Large numbers of those who were halt and cripples from chronic hip and knee diseases were taken to her. As in the case of most others of those less pretentious natural bone-setters, who are found more or less thickly about the country, ignorant of anatomical knowledge, and innocent of even the meaning of the word pathology, the invariably pathology of the cases brought to this woman, as she claimed, was that a bone was "out," and that when by her manipulations the bone was restored to its place, a cure would be effected.

Her method of treatment was to keep the affected joint continuously poulticed from ten days to two weeks with a poultice of marsh-mallows; during this time gentle movements and firm rubbings were daily impressed upon the joint, and the expectation of the patient constantly excited as to the time when the final manœuvre was to be made by means of which the distorted bone was to be put back in its place. After sufficient of this preparatory treatment had been made, the final *coup de grace* was effected by a series of quick movements and an exclamation from the operatress that at last it was done! As a rule, all her manipulations, even her final climacteric performances, were nearly painless. Great improvement in the usefulness of the affected joints resulted in many cases. This woman, now about sixty years of age, is said to be modest. kind and gentle in her manners, and is undoubtedly firmly and honestly persuaded that the conditions which she imagines to be present in her patients really exist; for how otherwise explain the success of her treatment, which has been so great as to secure for her, after repeated legal prosecution for practicing without qualifications, an official decree from the Minister of the Interior in the Kingdom of Italy, authorizing her to treat dislocations, fractures and hip disease!

A review of her methods shows that they are as perfect as if they had been devised by one profoundly versed in psychology and pathology. The expectation of the patient, his confidence in the result, and the co-operation of his will, are all enlisted by

them. She probably never heard of Tuke on "The Influence of the Mind upon the Body," but she could not have done more wisely if she had closely studied it. She believes in herself as thoroughly as Bonaparte did in his "Star of Destiny;" to her every case is an engagement, and every patient she makes an Old Guard. The real condition of the joints, in the manipulation of which her success is so signal, can very rarely be that of dislocation or even of subluxation.

Those who have read that most delightful and profitable little book of Wharton P. Hood, entitled "On Bone-setting," will retain a vivid remembrance of the clear manner in which he demonstrates the function of persistent bands of adhesion, both extra- and intra-articular, in producing permanent lameness of joints after all inflammation has subsided. The profession owes a debt of gratitude to Dr. Hood that he availed himself of the opportunity to study the methods of one of the ablest bone-setters, and that having pursued his studies after scientific methods he has given us the results as he has. These cases of lame joints confront every practitioner continually; too often they constitute an *opprobrium chirurgicum:* and when, after having been long unrelieved through the want of skill or attention of the educated practitioner, they are cured by the manipulations of a bone-setter, they bring scientific surgery into discredit. It is our conviction thst in a majority of cases of stiff joints the obstacles to motion exists less in intra-articular effusions and adhesions than it does in the changes which the extra-articulate structures have undergone; stiffened and adherent muscles and ligaments, contracted fasciæ, tendons and sheaths inseparably blended, conditions which have developed from old inflammations about a joint or from prolonged disuse after bruises or other injuries, these are the chief causes of disability. How admirably the emollient poultices, the rubbings and the movings practiced by the Italian woman, are adapted to promote the absorption of effusions, the stretching and rupture of adhesions, and the restoration of tone to debilitated structures! It is true that no new principle, no new method, is found in her practice. She is but a skillful *masseuse.* The reason why physicians in general so often fail to relieve the cases in question, and so permit them to fall into the hands of empirics, is that these details of poulticing and rubbing and moving demand a degree of patience and devotion to trifling

details which is possessed by few. As in so many other things the brilliant successes of such a person as Madame Dal Cin alone are heard of, while of the many failures and occasional disasters nothing is said. We are cognizant of one case in which she awakened in a hip joint acute inflammation which terminated in abscess and necrosis. The scientific surgeon weighing carefully all the elements of the problem, which each case that comes before him presents, will determine what cases are the proper ones to submit to manipulation and what to leave undisturbed. In his hands the same brilliant successes will be secured by the same methods in the one class of cases, while in the other disasters will be prevented. Under the guidance of the educated surgeon, Madame Dal Cin and such as she might do work of yet greater value. The methods of the natural bone-setter, as in the case of the English Hutton and the Italian Dal Cin, may sometimes repay the consideration of the educated surgeon. It may be a mistake to always ignore them, or to invariably dismiss their work with a sneer and the epithet of quackery.—*Annals of Anat. and Surg.*; Jan., 1881.

Gastric Remittent Fever of Infants and Young Persons. A Distinct Disease not to be Confounded with other Fevers.—According to Dr. F. Peyre Porcher, gastric remittent, which by some authors is incorrectly regarded as aborted or mild typhoid, may be excited in a person living under the influence of malaria, by anything irritating the stomach or gastro-duodenal mucous membrane; and the resulting febrile disturbance is not an intermittent, but *gastric* (or *gastro-duodenal*) *remittent;* but uncomplicated gastric-remittents can also be met with on the highest mountain plateaus, where not a whiff of malaria exists—the malaria being responsible only for the periodicity of the disease. The distinction between these cases, which are said to be very common in Charleston and throughout the South, and ordinary malarial cases, is clearly defined, and is of great importance in the treatment; since they are never reducible by quinia alone, but require special treatment in which alkalies play a prominent part, with mild mercurial alteratives.—*Am. Jour. Med. Sciences*, Jan., 1881.

IN THE CHILDREN'S HOSPITAL.

EMMIE.

Our doctor had call'd in another; I never had seen him before;
But he sent a chill to my heart when I saw him come in at the door,
Fresh from the surgery-schools of France and of other lands—
Harsh red hair, big voice, big chest, big merciless hands!
Wonderful cures he had done; O yes; but they said, too, of him
He was happier in using the knife than in trying to save the limb;
And that I can well believe, for he looked so coarse and so red,
I could think he was one of those who would break their jests on the dead,
And mangle the living dog that had loved him and fawn'd at his knee—
Drenched with the hellish Oorali—that ever such things should be!

Here was a boy—I am sure that some of our children would die
But for the voice of love and the smile and the comforting eye—
Here was a boy in the ward, every bone seem'd out of its place—
Caught in a mill and crush'd—it was all but a hopeless case;
And he handled him gently enough, but his voice and his face were not kind.
And it was but a hopeless case. He had seen it, and made up his mind.
"All the more need," I told him, "to seek the Lord Jesus in prayer;
They are all his children here, and I pray for them all as my own."
But he turned to me, "Ay, my good woman, can prayer set a broken bone?"
Then he mutter'd half to himself, but I know that I heard him say,
"All very well—but the good Lord Jesus has had His day."

* * * * *

And she lay with a flower in one hand, and her thin hands crost on her breast—
Wan, but as pretty as heart can desire, and we thought her at rest,
Quietly sleeping—so quiet our doctor said, "Poor little dear!
Nurse, I must do it to-morrow; she'll never live through it, I fear."
I walk'd with our kindly old doctor as far as the head of the stair,
Then I return'd to the ward.—The child didn't see I was there.
Never since I was nurse had I been so grieved and so vext!
Emmie had heard him; softly she called from her cot to the next,
"He says I shall never live through it; oh, Annie, what shall I do?"

* * * * *

My sleep was broken besides with dreams of the dreadful knife,
And fears of our delicate Emmie, who scarce would escape with her life.
Then, in the grey of the morning, it seem'd she stood by me and smiled;
And the doctor came at his hour, and we went to see the child.

He had brought his ghastly tools; we believed her asleep again—
Her dear, long, lean, little arms lying out on the counterpane;
Say that His day is done! Ay, why should we care what they say?
The Lord of the children had heard her, and Emmie had past away.

—Alfred Tennyson, in *Brit. Med. Jour.*, Dec. 4, 1880.

NOTES AND ITEMS.

THE COURIER AND J. H. CHAMBERS & CO.—The Executive Committee of the Medical Association congratulate themselves, and all who are interested in the prosperity of THE COURIER, upon the arrangement consummated late last month for its publication. The medical profession of the West have become acquainted with Mr. Chambers during the last few years by means of the valuable medical publications which he has presented to their notice. Among the most prominent of these is *Reynolds' System of Medicine,* of which more than 4,000 copies have already been placed in the hands of the profession through Mr. Chambers' agents.

The same well-systematized agencies that have characterized Mr. Chambers' undertakings heretofore will be employed to bring THE COURIER to the favorable notice of the profession throughout the Mississippi Valley.

We bespeak from all our old friends a hearty co-operation with us and with the publishers in the efforts that will be put forth to make new friends for THE COURIER. We want the practical sympathy and support of all the best men in the West as evidenced by their names upon our subscription list, as well as upon our list of contributors, and we think the names of the best men will be found in excellent company upon both lists.

We take occasion to commend to our readers the publishing house of J. H. CHAMBERS & CO.

SOCIETY meetings illustrate the curious physiological fact that when any accident, prenatal or otherwise, arrests the development of the cerebral mass, the posterior part of the third left frontal convolution generally remains intact, or may even be the seat of an extra molecular activity. There is a certain number of persons, generally but not always in the decline of life, who will get up and talk, whatever may be the subject, and one could easily experience the idea of eternity by listening to them, we will say, for one day.—New York Letter to *Chic. Med. Jour. and Ex.*, Dec., 1880.

A SERIOUS epidemic of small-pox is prevailing at Clinton, Mo.

AMERICAN STUDENTS AT VIENNA.—Thirty-eight out of nine-five foreign students at the University of Vienna last summer were from America.

A YOUNG Russian lady, who was studying medicine in Paris, committed suicide a few days ago by firing a revolver through her brain, death occurring instantaneously. Despair of being able to pass her examination was the cause.

THE EYES OF SCHOOL CHILDREN.—The authorities of Hyde Park, Mass., have arranged to have a competent specialist assume the supervision of the eyes of all the school children in that place. We know of no other town in the country that has taken such a step as this.

THE "SPECIALIST AND INTELLIGENCER" becomes the "AMERICAN SPECIALIST" with the January number of its second volume. The object of this journal is to supply to the general practitioner information in the special departments by workers in specialties. It is a well-conducted journal.

DR. L. P. YANDELL has withdrawn from the field of medical journalism, as his practice will not permit of his giving the time that he has heretofore done to the *Louisville Medical News.* Dr. R. O. Cowling will hereafter be the editor of that sprightly journal, with whom is associated Dr. H. A. Cottell.

NO RATS IN THE PACIFIC ISLES.—It is a remarkable fact that there are no rats in the islands of the Pacific Ocean. Repeated attempts have been made to acclimatize the rodents there, as the flesh is much esteemed by the natives as an article of food. But the attempts thus far have failed, as they invariably die of consumption.—*L' Union Méd.,* Oct. 31, 1880.

INTERNATIONAL COPYRIGHT.—That disregard of the rights of authors is not confined to American publishers is shown by the fact that the series of "American Health Primers" is being reproduced in England under the name of "Ward and Locke's Long Life Series." In such of the republications as have reached this country the slight alterations that have been made seem to have been designed to conceal the American origin of the books.

London Streets.—It is some little consolation, perhaps, to know that the streets of London are as greatly in need of cleaning as are those of our own city. A writer in the *British Medical Journal* complains bitterly that "filth of all kinds and description; ordure, both human and animal, is allowed to remain for days together, and no attempt is made to remove it, except that sent by nature in a shower of rain."

To Restore the Heart's Action when it has Ceased to Beat.—Jago suggests the testing of acupuncture of the heart as a means of restoring its action when this is interrupted in the administration of chloroform or anesthetics. He recommends careful experimentation as to the effect of acupuncture of the heart in animals.

He relates, also, a case in which the action of the heart had been suspended under the administration of bichloride of methylene at the hands of a dentist. When Dr. Jago was called in respiration, and pulsation at the wrist had ceased. The doctor gave the patient a sharp, very sudden blow with his knuckles over the region of the apex of the heart. This seemed to arouse the heart's action at once. Respiration and pulsation returned, and the patient was saved. He believes this procedure might be of service in desperate cases of syncope due to other causes.—*Brit. Med. Jour.*, Dec. 11, 1880.

The present weekly issue of the *British Medical Journal* amounts to 10,000 copies.

Cerebral Thermometry.—R. W. Amidon asserts that the result of a series of observations carefully performed recently demonstrates: 1st. That heat can be transmitted through the dead human cerebral envelopes in very appreciable quantities. 2d. That it is better transmitted when the envelopes are themselves warmed to more nearly simulate the living textures. 3d. That the rise of temperature commences externally in from five to eight minutes after the internal elevation, and attains its maximum in from eight to twelve minutes, and that the fall of the two temperatures pursues the same course. 4th. The average of eighty temperatures taken shows a ratio of the internal temperatures to the external of 2:1. This ratio is much diminished when the media are warmed; hence, it is natural to to suppose that in the warm, living state the ratio would be smaller still.—*N. Y. Med. Rec.*, Dec. 25, 1880.

Most Successful Cesarean Operator.—Dr. Ludwig Winckel, residing at Mülheim, on the Rhine, is said to be the most successful of all the European gastro-hysterotomists. He has made the Cesarean section fourteen times, saving six mothers and nine infants, or $42\frac{6}{7}$ per cent. of the mothers and $64\frac{2}{7}$ per cent of the infants.

Dr. R. P. Harris, of Philadelphia, has collected statistics of 128 operations in the United States, West Indies and Mexico, and finds that in 57 of these, the mother was saved, or $44\frac{1}{2}$ per cent., a better record than that of Dr. Winckel. Dr. Prevost, of Louisiana, saved three mothers of four operated on and all the children.

On Restoring the Heart's Action when it has Ceased to Beat.—J. C. Reid relates a vivisection experiment of his college days. He killed a mouse by a blow upon the head and opened the thorax in order to see the heart beat. It did not beat until he pricked it with a needle and set it agoing. A second prick temporarily revived the pulsations when they ceased. He also cites two cases, one occurring in his own practice and one in his father's, in which the heart's action had ceased entirely, and the patients were thought to be dead, but the regular action was restored by means of a douche of hot water, a stream being allowed to fall upon the præcordium from a height of several feet.—*Brit. Med. Jour.* Dec. 25, 1880.

Extensive Scalding from Prolonged Exposure to Steam at a High Temperature.—Dr. Norman H. Chapman, while acting as resident surgeon of the Pennsylvania Hospital, had the opportunity of studying the effects of scalding in twenty-nine persons, injured by a railway accident at May's Landing, New Jersey, of which number fifteen died. A clinical *résumé* of the cases is presented and the question of treatment, both medical and mechanical, is discussed at some length. Carbolized oxide of zinc ointment (1 to 32) was employed with good results; the local anesthetic as well as antiseptic action of the carbolic acid, mitigated the pain as well as lessened the offensive odor. A peculiar eruption resembling miliaria rubra, appeared in some cases from the sixth to the eighth day, which was apparently due to the inflammation of the sweat-glands, and not connected with the medical treatment.—*Am. Jour. Med. Sciences,* Jan. 1880.

Annals of Anatomy and Surgery.—This is the new name of the journal which has heretofore been published under the name of the *Annals of the Anatomical and Surgical Society of Brooklyn.*

This was one of the handsomest and most valuable journals on our exchange list. The material has been of excellent quality, and the style of presentation surpassed by nothing in the field of journalism.

The change of title indicates an enlargement of the work undertaken. It is the aim of the editors to give this journal such relations to the profession in our own country as are held in Germany by the *Archiv für Klinische Chirurgie*, the *Centralblatt fur Chirurgie* and the *Deutsche Zeitschrift für Chirurgie*, and in France by the *Bulletins et Memoires de la Societe de Chirurgie de Paris.* They intend it to be "not so much a journal for specialists as a special journal for all practitioners."

We extend most cordial congratulations to the *Annals* upon the success which stimulates to enter upon this broader field, and wish the editors, Dr. L. S. Pilcher and Dr. Geo. R. Fowler, continued and increasing evidence of the appreciation of their work.

On the Action of Carbolic Acid Upon Ciliated Cells and White Blood Cells.—A series of valuable experiments, conducted by Dr. T. Mitchell Prudden, with a view to determining the effects of solutions of carbolic acid of varying strength, first upon the structure and secondly upon the function of certain living cells, has led to some interesting and novel results, whose value consists in their relation to the question of Listerism so-called, which is now under discussion and trial by surgeons throughout the civilized world. Very decided effects were found by Dr. Prudden to take place in living ciliated and white blood cells; strong solutions caused immediate cessation of movements and death of the cells, with speedy disintegration of the protoplasm, while even dilute ones caused retardation or arrest of movements, preventing diapedesis, and modifying materially inflammatory conditions. As Dr. Prudden shows that it restrains suppuration, its value as a surgical dressing may be considered as established quite apart from its supposed influence in destroying micro-organisms, and in other ways favorably affecting the healing process, by methods upon which the present experiments do not throw any light.—*Am. Jour. Med. Sciences*, Jan., 1881.

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ORIGINAL ARTICLES.

EMMET'S OPERATION.—ONE HUNDRED AND TEN CASES.

BY P. V. SCHENCK, M. D., *Surgeon to St. Louis Female Hospital.*

THIS operation should be an immediate one; a good rule in surgery is to unite a wound as soon as possible. It is not long since we were told to perform only the secondary operation in case of lacerated perineum, because in the first place, the immediate operation was not considered safe; second, the lochial discharge passing over it would prevent union. No one now stops for such reasons. In almost all accidents we could have selected a more favorable time for their occurrence; times more advantageous to attempt their relief.

We often risk more by postponement in these cases than we should by proceeding with the case in hand, even though the patient may be in a physiological condition, such as pregnancy or involution of the womb. The time of election for operation is one week after the menstrual period,

watching, as Storer has expressed it, the ebb and flow in women; but such things are not always matters of election. Again, say some, care should be exercised; the operation is new, and new ideas, like the pendulum when first started, swing too far. They cite cases of the danger, giving an array of deaths from minor operations.

There has always been a fear of the bloody operations on the womb. Bard opposed cutting the os uteri in rigidity, and said that when Smellie snipped the edge of the orifice with a pair of scissors or cut it with a knife, the event was generally, or, as he believed, always fatal. But we now know that uterine tissue, in common with all involuntary fibre, is healed more readily than any other tissue. While unexpected dangers may be incident to the simplest uterine manipulation, yet on the other hand, we have such cases as that reported by Dr. Schwartz of Berlin, where a womb was completely pulled out and freed from vaginal attachments by a midwife, and she recovered. Last spring, in performing an ovariotomy upon an insane woman, a woman in whom the facies ovariana was more marked than in any other case I ever saw, who with loss of appetite and emaciation had become almost moribund, it became necessary during the operation to excise the womb at the internal os and remove the body. This woman recovered without unpleasant symptoms. Gooch has reported a case where a woman became pregnant, in whom the os uteri had been destroyed by previous disease. In place of the os uteri there was only a hard contracted circle, formed by a cicatrix. Three surgeons attended this woman in her labor, and they all agreed the os was lost; the labor pains caused the head to push the lower part of the uterus down. They therefore with Pott's bistoury made an artificial os uteri, and the result was entirely successful. Dr. Martin, in 1869, related a case of cervical rent stitched during pregnancy, and there were no bad symptoms.

The immediate operation does not merit the name of bravery in gynecology. Even if it did, there is much of

truth in Dr. Goodell's statement, when he says he has come to the conclusion that he is the most successful gynecologist who is the most plucky, and that no matter how severe or how mild the treatment of uterine disorders, the percentage of accidents will be about the same, and that a very low one.

When we consider that cases of laceration of the cervix have a bad getting up, that each one has more or less of septic trouble, that if the raw exposed surface heal by nature, cicatrices remain at best, are we not justified in performing, do not the circumstances of our patients demand the performance of the simple operation of placing a few silver wire sutures to bring these large raw surfaces together to remove them from exposure, even though there be failure in producing a union? The fears of septic infection where the suture wires are, is simply hypothetical. Even if they give new foci, they close up a much larger area.

The signs of laceration are not well marked just after labor, the tissues are too soft; but he is a poor diagnostician who cannot tell if the tear is of any extent. The immediate operation should be performed, its necessity is so fixed, the time when a woman has to lie in bed is so appropriate, that the decision to perform it should not be delayed.

The life of a mother who has just given birth to offspring is the most precious life in a community. The obstetrician should inform himself thoroughly as to the existence of laceration of the cervix, says a prominent writer; the false and vicious doctrine of underestimating and ignoring this accident should be silenced forever, so that a neglect of the early repair by surgical resort should be regarded as flagrant obstetrical dereliction; thus the number of women affected by pelvic disorders will become suddenly and wonderfully diminished.

Have there been any fatal results from Emmet's operation? Dr. Emmet reports two in two hundred cases; Dr. Goodell has had but one bad result in fifty-four cases; Dr. Engelmann reports one case in his own practice, one in the care of Dr. Baker and one in that of Dr. Marcy. This is

certainly a small mortality for such a large number of successful operations as have been performed, besides there was in each case some influence outside of the operation deleterious in its results. I assisted in the first operation in Dr. Engelmann's case, and was also present at the post mortem. The patient was suffering from jaundice and I am far from being persuaded that the place of operation was the starting point of the general peritonitis as found. The peritoneal disease was much more marked over the region of the liver than that of the womb. Besides the liver was far from being in a normal condition. I feel that the doctor has, to his credit be it said, done himself and the operation an injustice.

What is the effect of Emmet's operation upon future pregnancies? Dr. Barker says the fact is one commonly recognized that cicatricial tissue after an operation is absorbed; Dr. Hanks has shown that no cicatricial tissue remains, that it disappears in the same manner as in the urethra. I have often shown physicians the cervices upon which I had performed hystero-trachelorrhaphy less than a month previous and there were no cicatricial lines left to tell upon which side the operation had been performed. I know of but one reporter, Dr. Janvrin, who reports a case rendered unfavorable from Emmet's operation having been performed; while on the other hand we have the reports of Dr. Hanks of New York, Papin of St. Louis and many others, of cases of labor occurring subsequently without difficulty or the laceration being reproduced.

I have performed hystero-trachelorrhaphy one hundred and ten times, with no ill results, though I have not placed the patients under tedious preparatory treatment, as has been suggested, and to which Bozeman thinks many of the cases of success in Emmet's operation are due. Perfect union was obtained in all but five cases, and in but two did no union take place. In all cases, of complete union, the results have been all that could be desired; and all from whom I have heard, state that they have remained well.

Of the one hundred and ten cases, seventy one were first labors; sixty two, labors were rapid; twenty, instrumental labors; seventy, left side lacerated; twenty, bilateral; eleven, right side; nine, stellated; eighty-five, had uterine displacement; seventy-five, retro; ten, ante; sixty-eight, had irregular menstruations; ninety-four had leucorrheal discharges.

In conclusion, Dr. Emmet should be thanked by the profession for making clear a road which heretofore was dark, for being a guide who has invited us to his special surgical walk and shown us a safe and straight road to the desired goal. As a teacher he has held the lamp low on the difficult path. Specialists are accused of seeing too much the general system as influenced by the organ upon which they devote most of their thoughts. The brain of practitioners is supposed to become like the one-furrowed field, all the soil washed into this central ditch; but gynecologists are, as Barnes says, *all-around* physicians, they do not see the womb at the bottom of an ill which it does not cause, they are not such one-organed doctors, they are not seized with a womb panic, so that they can see no ill except it be uterine. But they by their study are made aware of the lamentable fact that the general profession as a rule do not sufficiently regard the influence of the sexual organs, during sexual life, in the etiology of disease, and are too apt to forget that facts and cases prove, that pathological changes in the womb occur seldom as a primary cause, but most frequently as the result of parturition, sub-involution and disordered function. In the treatment of woman and her ills we should remember that she must be assisted in her functions, ministered to in her diseases; that surgery and medicine are the two oars of our life-saving professional boat, and he is the wisest professional man who knows when to seize the one, where to use the other, and when to work them both. The study of the functions of the cervix and os uteri perfects our knowledge of the whole womb. Relief from disease is now obtained where in past years it would

have been impossible. No such case could occur now as reported by St. Luke, the Physician, where a woman had an issue of blood for twelve years and had spent all her living upon the practitioners. Such a statement shows a more honest list of patronage but a less informed profession. The exploration of the womb has made the study of its diseases plain, and gynecology has opened the most promising special field for the relief of human suffering. A perfect system of it may be compared to a house, the different stories of which have been erected by different architects; and illustrious physicians have a large claim upon our gratitude for having by their great and successive labors, advanced the building to its present height. In proof of this advance I take it to be the duty of the practitioner to report each and every instructive case, and he must not wait until the professional field of his observation is covered with a forest of facts. He should give his observations and have a theory. Simple observations have been compared to a power which creates an alphabet; theory resembles a power which arranges all its component parts in such a manner as to produce words and ideas. To observe is to think, and to think is to reason in medicine.

In illustration of the character of the cases and the results of the operation of trachelorrhaphy I give abstracts of some of the clinical histories as furnished by my medical assistants.

Case I.—Warren G. Priest M. D. reports as follows: Jennie V. aged 26, nativity U. S., social condition a widow, occupation that of house-wife, was admitted to Female Hospital Nov. 12th 1879. Patient stated that she is the mother of two children, the youngest being three years of age; since the birth of the last child, she has been an invalid. The labor was natural and not tedious; previously she had enjoyed the best of health, indeed was rugged. Since the death of her husband, being left without means, she, too feeble to earn a livelihood, was compelled to seek public charity; and she had, therefore, during most of the past

year been an inmate of the City Alms-house. At time of admission she was suffering from hemicrania, aching in her back and limbs, had severe bearing down pains and a profuse leucorrhea. She stated that she was very irregular in regard to her periods; had severe suffering before they appeared and when they came on; they were very abundant, amounting often to what she considered a hemorrhage. Examination found an extensively ruptured perineum, a prolapsus of the womb (3rd degree), a bilateral laceration of the cervix uteri, leucorrhea and endometritis.

She was immediately placed under treatment preparatory for an operation, and put under good hygienic influences and given tonics to overcome in some measure her anemic and feeble condition. December 6th, the left side of the laceration of the cervix was denuded, and then the womb was as far as possible replaced; a crescent shaped denudation was then made in the anterior and left lateral vaginal wall next to and opposite the denuded portion of the cervix; five silver wire sutures were passed through and behind this denuded tract, being carried over and through the freshened edges of the cervix. It was then all closed, the woman put to bed, a medicated cotton tampon having been introduced to retain the womb in situ. The woman was required to lie upon her back and under no condition to get up. December 9th, the tampon was removed and another one placed; thus with the change of these tampons she remained quiet until December 15th, when the stitches were removed, and union was found to have taken place perfectly; the womb was held in the position in which it was left at the time of operation. The woman was allowed to go about her ward, but to keep quiet. A support was placed under the womb. January 1st 1880, the same operation was performed upon the right side as had been done on the left, with the exception that the womb did not require such a degree of replacement. The same after-treatment was pursued; and on the ninth day an equally favorable union was found to have taken place; the womb was now held firmly

up by the vaginal wall. On January 15th 1880, perineorrhaphy was performed, which resulted in perfect union, after which the patient rapidly improved and on February 11th 1880, she was discharged cured.

February 9th 1881, patient is now well and has remained so ever since discharged from hospital; she is earning her livelihood receiving good wages as a house-girl.

Case II.—Joseph Grindon, M. D. reports as follows: Minnie K. aged 22, nativity U. S., social condition married, occupation seamstress, was admitted into Female Hospital May 28th 1880; she states that she has had one child which is ten months old. The labor was an easy one. General health had been good and menses regular until time of pregnancy. Patient now complains of pain in the back and loins, which she attributes to a fall met with in the second month of her pregnancy; often experiences a sense of malaise; has had leucorrhea; vaginal examination reveals a condition of things closely simulating prolapse. The cervix uteri protrudes from the ostium vaginæ and presents a bilateral laceration, the lips are somewhat everted. The sound being introduced gives a depth of six inches. Placing the patient in genu-pectoral position shows that three and a half inches are due to cervical elongation. The cervix presents hypertrophy in no direction but that of length. There is endometritis and uterine leucorrhea. June 21st 1880, trachelorrhaphy was performed; no anesthetics were given, no speculum used, as the cervix was out in full sight. June 25th digital examination reveals the surprising fact that the cervix has retreated about two inches in the last four days; patient states that she has felt much better since the operation. June 28th, stitches removed, union perfect, cervix about three quarters of an inch long, position of womb normal; patient says she has not felt so well since pregnancy. Discharged August 9th 1880, as cured. February 9th 1881, patient continues in perfect health; no return of cervical elongation, no endometritis or leucorrhea.

Case III.—J. B. Leffingwell, M. D., reports as follows: Mary E. L. aged 38, nativity England, social condition married, occupation housewife, was admitted to Female Hospital September 17th 1880. Patient states that her catamenia appeared at the age of 13; they were regular; and in every respect patient's health was good, until the occurrence of her first and only confinement, which was thirteen years ago. From that time she has never enjoyed a day of perfect health. In the first place the puerperal convalescence was retarded and prolonged; she suffered from headache etc. Later she has had constant and severe pain in back and left side, aggravated during the appearance of the menses; the periods have been irregular and scanty, at one time intermitting for several months; patient during all this time has been a victim of hemicrania. When admitted she was complaining of severe pain and tenderness of both sides, the glands of left groin greatly enlarged and tender; she had pain in head and side, also in her back; there was no fever, the chest sounds as elicited upon auscultation were normal, there was some tenderness in left iliac region. Patient states that she has been under medical care the greater portion of the past thirteen years, and lately has been entirely confined to bed. All her ills she attributes to constantly catching cold. A vaginal examination reveals an immense left lateral laceration of the cervix uteri with eversion of the lips in the third degree (Mundé); the cystic hyperplasia being in the greatest excess, the whole presenting surface seemed one mass of cysts; the uterus was deep and retroflexed, there was endometritis and a free leucorrheal discharge. October 6th, 1880, trachelorrhaphy was performed, six silver wire sutures being used and all enclosed in rubber tubing, no anesthetic was given. October 16th, stitches removed, union complete, no leucorrheal discharge to be seen. November 16th 1880, patient well; no return of endometritis or leucorrhea, position of womb perfect, depth normal, pain about back and sides gone; the change for the better in this woman's condition and general appearance is something remarkable.

Case IV.—F. T. Outley, M. D., reports as follows: A., aged 32 years, native of Germany; social condition, married. She is the mother of four children. Has had one abortion. Since marriage has constantly labored under religious excitement. After the abortion she became very excitable, and the epileptic attacks, to which she had been subject in her youth, recurred. These seizures occurred almost daily. After the death of her youngest child she became violent, and was placed under asylum hospital treatment. She is now suffering from chronic mania and epilepsy; the attacks of the latter occur most frequently at night; and an interval of from five to six days usually intervenes between the paroxysms. During this interval the patient is quarrelsome and destructive; has to be closely watched, to be dressed and entirely cared for. March 8th, 1880, she was examined with Sims' speculum, because she had been suffering from suppressio mensium. The uterus was found displaced, subinvoluted; and there was a bilateral laceration of the cervix uteri, and catarrhal discharge. There was some eversion. Remedies were applied to restore the function of menstruation, which resulted in only partial success. May 12th, 1880, trachelorrhaphy was performed, not with a view of relieving her mental condition, for her mania had existed too long, and the fact that her father had died insane showed that there was a hereditary taint. The object was to relieve her physically.

In the operation, the parts being thoroughly denuded, the tear was brought together with seven stitches. The result was that only one side united, but this caused a great improvement, not only in her physical but also in her mental state. The womb became almost in its normal location, and was much reduced in its depth. While under care she had but one epileptic seizure; she became quiet and orderly, and improved so much that her services were utilized in the institution in the way of dining-room work, etc. Her menses did not permanently return; yet she increased so much in flesh, and improved so surprisingly in

general health, that it led to the hope that her health might be fully established if both sides of the laceration could be successfully united. The woman left, before any further operation was performed, to go to her home, on the 17th of August, 1880.

CASE V.—Ann M., aged 45. German—social condition married, has had four children. Following the birth of the last child she had puerperal mania, which has now become chronic. This patient is quarrelsome; when not quarreling she sits morosely in some corner of the room, scarcely speaking to anyone or noticing them. Her health is not rugged, and her appetite is poor.

November 10th, 1880, this patient was carefully examined. A laceration of the cervix was found, stellated in character; there was considerable eversion and cystic hypertrophy. December 10th, 1880. Emmet's operation was performed. No antiseptics were used; silver wire sutures were introduced and fastened, the ends all being inclosed in a common rubber tubing. The union at the tenth day was perfect, when the sutures were removed. Since that time this woman has greatly improved in her general health, and is much more quiet and cheerful.

CASE VI.—Mary S. aged 30 years, of St. Louis, is suffering from chronic melancholia; but little can be found out in regard to her history, either as to the predisposing or exciting cause. This case, like the other two, is chronic in its character, and beyond the hope of any means of cure. December 12th, 1880 she was examined per vaginam and a bilateral laceration of the cervix uteri found; the lips were everted and the consequent hypertrophy existed; there was a uterine leucorrheal discharge; the womb was dislocated and in the right lateral retroflexed position; there was some sub-involution. Trachelorrhaphy was performed, the sutures being placed and secured as before mentioned; a perfect union was the result, and now at the end of a month she has much improved physically and mentally; she is much more rational. Febuary 9th 1881, examination shows that

the womb is in normal position, only two and a half inches in depth, and that there is no leucorrheal discharge; the symptoms of melancholia have vastly changed for the better.

Case VII.—Arthur Goebel M. D. reports as follows: D., aged 31 years, native of U. S., social condition married, by occupation seamstress, was admitted to Female Hospital April 26th 1880. The patient enjoyed good health prior to the last four years, menses always full and regular from her thirteenth year until the time mentioned. She had one child nine years since, has had also two miscarriages, the last one in September 1879; since then she has had menstrual irregularities, the discharge becoming very profuse and often continuing for weeks; general health below par; has a feeling of malaise. Her trouble shortly before admission was greatly aggravated by an attack of dysentery. Her condition was anemic, and she was much emaciated, was sleepless and restless at night, had no appetite, never free from headache. Examination revealed laceration of the cervix uteri, bilateral and extensive. There was subinvolution; exploration with sound and wire curette showed that the mucous membrane of uterus was roughened and uneven. For the relief of this fungous degeneration of the lining of the uterine cavity, after dilatation of the cervical canal, the curette was freely used, and a large amount of membrane tissue removed, no metrorrhagia after removal, menstrual flow became regular. Still the patient suffered greatly from many of the ills sequent upon laceration of the cervix; and with as little delay as possible, she was operated on for its relief. Seven days after trachelorrhaphy the sutures were removed and union by first intention was complete. The improvement was marked and rapid, there was no pain, no feeling of uneasiness, no leucorrheal discharge; uterus gradually involuted to its normal size, and patient was discharged as well. Three months later she was in perfect health with no return of any discomfort, menstrual flow regular and normal.

CASE VIII.—Kate F., aged 26, native of Ireland, servant, has had three children; last child born June 1877; the labor was natural, lasted three hours, since then patient has been an invalid, constantly under professional care, and compelled to lie in bed one half of the time, suffering from dysmenorrhea; one week preceding the occurrence of the menses she would have attacks of nausea and vomiting, attended with slight fever, some cramping pain over the region of the stomach, a sharp pain in the lower part of the abdomen; these pains would precede for several days, and continue until after the menstrual flow was thoroughly established; the menses were so profuse and weakening that she was unable to be about. She had severe pains in her back at all times, and had what she called a broken-in-two feeling. Examination showed a torn perineum, a subinvoluted retroflexed womb, an endocervicitis with catarrhal discharge, an extensive bilateral laceration of the cervix uteri, the tear on each side extending to the vaginal junction of the mucous membrane. September 15th 1880, Emmet's operation was performed with complete success, and a perfect mend of the tear obtained.

February 9th 1881, this patient was examined to day, her health is perfect, there is no discharge from the womb, the position and depth of womb are normal, she has no more attacks of dysmenorrhea; indeed her periods occur without the slighest pain, the os uteri appears like a virgin os, no cicatricial line is left, and there is nothing to indicate that the cervix has been operated upon. The patient says she has never felt better than she has for the past few months, she is now working constantly and laboriously in a laundry.

STRICTURE OF ESOPHAGUS—GASTROSTOMY.

By T. F. Prewitt, M. D., *Professor Clinical Surgery, Mo. Med. College.*

[*Read before Medico-Chirurgical Society, January, 1881.*]

CHAS. NASH, aged 62, first noticed difficulty in swallowing in January, 1880. After this he could only swallow solid food, such as meat, when thoroughly masticated. For the last three months has been able to swallow only liquids; and for the last month or six weeks but little of what he attempted to swallow passed into the stomach, the greater portion regurgitating soon after the attempt. When first seen by me, about August 25th, he was greatly emaciated and very feeble. He could swallow a glassful of water at a time, but the whole or the greater part would soon be regurgitated. From the amount of fluid that could be taken into the esophagus at a time, I was convinced that the stricture was low down in the tube. He stated that an unsuccessful attempt had been made to catheterize the esophagus, followed by some pain and a little blood. I suggested gastrostomy, and he left to consider the matter.

About September 3d, I found him in St. John's Hospital—more feeble than when last seen, not having made an attempt to swallow anything but water during the interval. He could scarcely stand alone, was emaciated to the last degree, and could speak but little above a whisper. He was anxious to have an operation performed, but as there was such extreme debility I thought it advisable to endeavor to recruit him by nutritive enemata before operating. These seemed to do little or no good, and at the the end of a week his condition was less encouraging than ever, his voice being feeble and husky and his extremities cold. Nevertheless he and his son urged an operation, and had done so constantly from the time of his admission.

Having explained to him the desperate nature of the case, the little hope that he would survive the operation, having in fact discouraged any operation, but finding him and his son persistent in their desire to have something done, I finally (Sept. 10), consented to operate.

A straight incision of two and a half inches was made parallel to and a finger's breadth distant from the costal cartilage of eighth rib on the left side, as advised by M. Verneuil. The incision was carried through the integument, fascia and muscles to the peritoneum. Further steps were then delayed until all oozing of blood had been checked, so as to prevent its escape into the peritoneal cavity. The peritoneum was then opened, when the stomach was found to be collapsed and resting far back against the spine. It was picked up and every precaution taken to guard against mistaking something else for that viscus. The attachment of the omentum and the arrangement of the gastro-epiploic vessels was observed and the stomach traced up to the esophageal attachment. It was then brought forward into the wound and secured by a corona of seventeen wire sutures, the abdominal peritoneum having been first well drawn forward so as to bring it in contact with that of the stomach at all points. The stitches were passed from without inwards, through the abdominal wall, including peritoneum, through the entire thickness of the stomach wall and out again and twisted. When this had been completed, an opening was made into the stomach within the circle of stitches. It has been advised at this point to introduce and leave in a drainage tube, but as I was unable to see the necessity or utility of it, I did not do so. After the operation, which was done under ether (Squibb's), with the use of the antiseptic spray, the patient was so exhausted, pulse feeble and extremities cold, that I introduced a little whisky and water into the stomach, but it was soon ejected through the opening. A compress of lint, wet with carbolized oil, was then applied with adhesive straps to keep it in position, and the patient removed to bed. Hot

bottles were applied and beef tea enemata and whisky used. No other attempts at vomiting occurred, and the next day beef tea, milk and scraped raw beef were introduced into the stomach at intervals of two or three hours. A bit of rubber tubing, such as is used for drainage, was attached to the nozzle of an ordinary rubber syringe, and with this fluids were introduced. The scrapings of the raw beef were rubbed up with milk, and could then be carried through the syringe into the stomach in the same way. No pain, no tenderness and no fever followed the operation. The nutritive enemata of beef tea, milk, raw eggs, with addition of quinine, were continued as well as feeding continuously by the stomach. The patient lived until the night of the 14th, the fifth day, when he died, seemingly from sheer exhaustion. The food administered seemed to do him no good.

Post-mortem twenty-two hours after death. Adhesion had taken place between stomach and wall of abdomen at point of operation. The veins of the abdomen were engorged with blood, but there were no evidences of peritonitis, except in the left lumbar region, where there appeared to be an inflammatory mass, not of recent origin. The left margin of liver, the omentum and spleen all seemed adherent to the abdominal wall by pretty firm adhesions, though when partially torn loose there appeared behind it a purulent looking fluid.

It was a matter of doubt whether this stricture was cancerous or syphilitic. He stated that he had had syphilis twenty years before. On removing the esophagus and examining it there could be felt, about one inch above the cardiac opening, a very small amount of induration seemingly insufficient to account for the closure of the gullet. On laying this open, there could be seen an ulcerated surface, commencing about one inch above the cardia, ascending about an inch and three-quarters to two inches, and entirely encircling the tube. There was but little induration at the base of the ulcer and its depth was not great.

At its lower border, that near the cardiac opening of the stomach, the edge of the ulcer was indurated and everted in such a way as to form something of a flap or valve, obstructing still more the lower part of the tube.

It is doubtful whether the operation shortened the days or even hours of this patient's life. It was impossible for him to have lived beyond a few days without this operation, as he had reached almost the last stage of starvation—while the opening formed afforded a chance at least of nourishing him properly. It cannot be said he died from the shock of the operation, and there was no evidence of death from peritonitis.

Union had taken place, an opening had been secured through which he could be fed, and but for the exhaustion which precluded all hope of recuperation, he might have been restored. In short had the operation been done earlier, it would probably have been successful to the extent of prolonging the patient's life until death occurred from the primary disease.

The operation of opening the stomach has been performed by surgeons in two classes of cases, with two distinct objects in view: first, for the removal of foreign bodies, and, secondly, with the view of establishing a permanent opening for the introduction of food in cases of obstruction of the esophagus. The terms used to designate these operations have not always been well chosen, and much confusion has resulted. The term gastrotomy was formerly used in many instances as synonymous with laparotomy, but is now limited to the operation for removal of foreign bodies from the stomach. The term *gastrostomy*, suggested by Sedillot, the first operator, is now universally accepted by surgeons to designate the surgical procedure designed to establish a fistulous opening for purposes of nutrition. Its etymology, "gaster," a stomach, and "stoma," a mouth, aptly indicates the purpose of the surgeon in its performance. It has long been recognized by surgeons here and there as a rational proceeding, clearly indicated by the

nature of the difficulty it was proposed to meet, and presenting in itself no insuperable obstacles to its successful performance. Yet until recently its history has been an unbroken record of melancholy failures.

It would seem almost superfluous to discuss its relative safety in view of the experience of the last thirty years in the field of abdominal surgery. Nevertheless, there seems to be a widespread prejudice against it, due partly to the fact that it seems to be considered as, in a measure, a more hazardous operation than others involving a section of the abdominal wall, and partly from the ill-success attending its performance, the latter fact influencing opinion, no doubt, as regards the comparative danger involved. At all events, it may be said that it does not yet hold the position of an established operation, but rather of one on trial, while with a very large proportion of the profession it seems to be scarcely entertained as an alternative measure in the cases it is designed to relieve. It would seem pertinent, therefore, to discuss it briefly: 1st, as a peritoneal operation: 2d, in the light of experience already had in its performance; and 3d, as a measure of relief in the distressing cases for which it is proposed.

In so far as it involves a section of the abdominal wall and an exposure of the peritoneal cavity, it is upon a par with all other operations included under the general term laparotomy, e. g., ovariotomy, enterotomy, gastrotomy, splenotomy, cholecystotomy, etc.

It is more especially comparable to the latter, cholecystotomy, which is also on trial, and involves a tacking of the walls of the viscus to the abdominal parietes. But little need be said, therefore, upon this head, since the argument would be the same as to laparotomy in general, and it would only be necessary to point to the brilliant results in recent years in this particular field. Beyond the mere section of the abdominal wall and the exposure of the peritoneum, however, there is in all cases of laparotomy a question of the viscus involved, the importance of its function

and the degree of injury proposed to be inflicted upon it. Ovariotomy and splenotomy are performed in suitable cases with the most gratifying success, while hysterotomy is a much more fatal operation, etc.

The inquiry would, therefore, naturally suggest itself, What is there to render operations upon the stomach peculiarly hazardous? and what is the teaching of experience in this respect? Wounds of the stomach, incised and other, have always proved very fatal, there being on record comparatively few well-authenticated cases of recovery—not exceeding sixty—from incised wounds of this viscus, and fewer still of gunshot wounds—not exceeding half a dozen. But it must be remembered that the danger in these cases is not so much from the injury done the stomach itself, as from the almost inevitable extravasation of its contents into the abdominal cavity, and the development of a general peritonitis, the recovery in many of the recorded cases having been due to the measures taken to close the wound and prevent extravasation. As to wounds inflicted by the surgeon, the operation of gastrotomy for the removal of foreign bodies from the stomach has proved singularly successful. Thus, of twelve cases recorded with greater or less accuracy, but one proved fatal. (Otis' Surgical History of the War of the Rebellion, p. 59.)

There could be no stronger evidence that the stomach is tolerant of injury *per se* than these cases afford. Evidently, then, we must look beyond the mere section of the stomach walls and the application of the needed sutures in gastrotomy for an explanation of the almost uniform mortality which has attended this operation.

Nor do we have far to seek. It will be seen, by a study of the history of these cases, undertaken in the immense majority of instances for malignant diseases of the esophagus, that the operation has only been made at the last moment, when emaciation had become extreme; when the vitality of the patient was at its lowest ebb; when the stomach, long deprived of food, was incapable of performing its

office; when, in short, the system was incapable of repairing the damage done, or rallying from its low state. With scarcely a single exception their condition is reported as one of impending death from slow starvation.

Nevertheless, it will be seen that in a large percentage of the fatal cases even, thorough union has occurred, no peritonitis has existed, and death has resulted from exhaustion. It seems clear that if the operation had been done earlier in these cases the results must have been much much satisfactory.

In the case of malignant disease, only a prolongation of life and a palliation of suffering could be hoped for at best, but the result of colotomy, in the somewhat analogous condition of cancerous disease of the colon, shows how much may be accomplished in this way. All know how much the local disease is aggravated and its progress hastened in cancer of the colon by the passage of foreign matters over the diseased structures, and such is equally the case in malignant disease of the esophagus, and there is no reason to doubt that if the operation were done earlier, before the powers of the system were exhausted, not only might life be prolonged by sustaining the strength of the patient by proper nourishment, but the progress of the disease would be less rapid in cancer of the esophagus, as has been proven to be the case in cancer of the colon, where colotomy has been performed at an early period. If the argument holds good in malignant disease of the esophagus, it will apply with equal or greater force in cicatricial stricture where milder measures have proved unavailing. For here we may hope for permanent relief and the prolongation of life indefinitely.

That gastric fistula is not incompatible with long life has been abundantly proven in the numerous instances where it has occurred as the result of accident in man, and of experiment in the lower animals. Dr. Kjoenig states that fifty-six cases had been observed up to 1876, and of this number death was attributable to the fistula in only one-

fifth of the cases. [*Abstract*, Aug., 1878]. In what way the fistula led to a fatal result is not stated. Murchison says that "in permanent fistula the general health has in most cases been wonderfully good." [*American Journal Medical Sciences*, July, 1858, page 216]. It is true that in these cases of accidental gastric fistula, their existence has in no way interfered with or superceded the introduction of food into the stomach in the ordinary way. In this fact we have a marked distinction between gastric fistulæ, the result of accident, and those formed by the surgeon in the operation of gastrostomy; since Bardeleben has shown that dogs with artificial fistulæ, when fed exclusively through these, seldom live over one year, while those allowed to masticate and swallow their food in the ordinary way, remain in good health indefinitely. The want of proper insalivation doubtless determines the difference in the first class of cases. This might prove a serious drawback to the value of the operation, if found to hold good in all cases, if human ingenuity were incapable of overcoming it. Trendelenberg attached a long tube to the short tube ordinarily kept in the opening. The patient was allowed to chew the food, partially swallowing and regurgitating some portions of it, and then passing it on through this artificial esophagus to the stomach, assisting the onward movement by blowing slightly with the mouth. In M. Verneuil's, Trendelenberg's, Howse's, Herff's and Staton's cases, the patients rapidly gained in flesh. In these five cases we have the conditions necessary to determine the degree of infirmity resulting from the operation in those cases where patients so far recover as to be considered in good health apart from the stomach fistula—and the solution of the question seems entirely satisfactory.

The striking phenomena observed in the cases of gastric fistula recorded by Dr. Murchison, were great thirst, increased appetite, diminished amount of urine, and in women amenorrhea." Schönborn of Königsberg, as also Herff of San Antonio, also found that no amount of water

taken into the stomach through the fistula allayed the thirst. It was only when passed down the throat that the sensation was relieved, and Dr. Herff's patient would first swallow it, then regurgitate it and pass it into the stomach.

It would appear then that in cases of cancerous disease of the esophagus, in the event of the operation proving successful, we may hope to prolong the patient's life in comparative comfort, free from the dread of starvation and the pangs of hunger, and this it will be conceded is no small boon, while in cases of cicatricial stricture, the patient may live, in perfect health for an indefinite period.

Under what conditions should the operation be resorted to? The object of the operation being mainly to rescue the patient from impending starvation due to inability to pass sufficient food through the esophagus to the stomach, it is obvious that it can only be called for, where the obstruction is permanent and irremediable by other means.

This leads us to ask what other means are at our command.

The answer is brief—catheterization and rectal alimentation.

Medication is useless except as a means of affording temporary relief from pain. As to rectal alimentation it may be dismissed with a very few words. At best it is a resource of the most temporary character and can be relied on for a very short time only.

As to catheterization its value and safety differ, according to the nature of the stricture. While strictures of the esophagus are the result of several distinct conditions, practically we are called upon to deal with them, in the immense majority of cases, as being either of a cancerous or cicatricial origin. While it would be interesting and profitable, perhaps, to enter into a discussion of the nature and differential diagnosis of obstructions of the esophagus from various causes, it would extend the limits of this paper much beyond its intended scope.

What then can be hoped from the use of bougies in the

two forms of stricture we are most frequently called upon to treat?

It will not be denied that in cicatricial stricture where flexible instruments can be made to pass without undue force much benefit is often derived from their use. The extent of the contraction, both as regards the tightness of it and the amount of surface involved varies greatly in different cases. In some it is localized and limited in its encroachment upon the calibre of the tube, in others it is co-extensive with the limits of the esophagus with a constant tendency to completely close it, the mucous membrane being destroyed and replaced by a serous or serofibrous tissue giving rise to peculiar valvular strictures analogous to those consequent upon dysentery (Rokitansky). We might expect then, in some cases of cicatricial stricture, to derive benefit from the cautious use of elastic bongies. These are the exceptional cases. The experience of surgeons in the treatment of these strictures when once well formed will be found, I venture to think, most discouraging. Even when treated from the outset, as soon as the inflammatory symptoms have subsided, and before symptoms of dysphagia have appeared by the *daily* use of esophageal bongies as recommended by Mr. Durham, (Holmes system vol. II page 541) I doubt exceedingly whether the results would be very satisfactory. Indeed there are few patients who would tolerate this treatment; while in many, even at a later period, the repeated and frequent introduction of instruments sets up such an amount of irritation as to lead to a suspension of the treatment. But admitting the feasibility and beneficial results of this treatment in a certain proportion of cases, a still larger proportion cannot be so treated with success; and bougies have to be abandoned.

It must be remembered, too, that the use of solid instruments and the exercise of force is fraught with the greatest danger in strictures of the esophagus as well as in strictures of the urethra, and that the rule is no less imperative in the

one case than in the other that no undue force should be used. Numerous deaths from such practice are recorded. As to cancerous diseases of the esophagus, it is doubtful if the introduction of bougies for the purpose of dilatation is *ever* justifiable. In epithelioma, the most common form of the disease, it will certainly hasten ulceration, while in scirrhus it cannot retard the growth, and in both there is ever present the danger of perforation of the esophageal wall and the speedy death of the patient. In epithelioma after the occurrence of ulceration, the use of bougies is *absolutely contra-indicated*, since the likelihood of pushing the instrument outside the track of the esophagus is infinitely greater than the chance of passing it on into the stomach. In a discussion before the Vienna Medical Society in 1879, Prof. Billroth "stated, as his opinion, that in the majority of cases of stricture, the result of carcinomata, the introduction of bougies only irritated the growths, accelerated ulceration, and caused more rapid death." [*Abstract*, May, 1880, p. 293, from *London Med. Rec.*, Mar., 1880.]

I believe the great bulk of thoughtful surgeons will endorse this view of Billroth. In the case then of cicatricial stricture of the esophagus where bougies will not relieve and in cancerous strictures the alternative presented is starvation or gastrostomy. Under such circumstances the humane surgeon can not hesitate. It is clearly his duty, as I think, to operate. The record of the operation, discouraging as it would appear, seemingly, gives promise of a brighter and more successful future. To realize these hopes it is essential that gastrostomy should be resorted to earlier, that the most approved methods should be resorted to, that antiseptics should be efficiently and carefully employed.

I have tabulated fifty-nine cases of gastrostomy. Of this number forty are stated to have been malignant, twelve cicatricial, three syphilitic, and in four cases the character of the stricture is not given but was almost certainly malignant. Of those operated upon for malignant disease one (Kuesler's) lived fourteen days, one (Lannelongue's)

Operator.	No. of Case.	Patient.	Sex.	Age.	Nature of Stricture.	Seat of Stricture.	Duration of Disease.	Condition at Time of Operation.	Result.	Cause of Death.	Condition of Wound.	Date of Operation.	Authority.	Remarks.
Sedillot	1		M	52	Epithelioma.	Middle ⅓	One year	Hopeless exhaustion	Death in 21 hours	Exhaustion.	No adhesions.	1849	Contributions a la Chirurgie, Vol. 2, p. 484	
Sedillot	2		M	58	Malignant		9 months		Death in 10 days	Exhaustion and peritonitis	Firm adhesions	1855	Same reference	No peritonitis.
E. Fenger	3		M	55	Malignant				Death in 58 hours	Exhaustion.		1854	Archiv. fur Path. Anat. and Phys., Vol 6, p. 350, 1854	
C. Foster	4	Walter H.	M	47	Epithelioma	Upper ⅓	5 months	Very feeble	Death in 45 hours			March 19, 1858	Guy's Hospital Report, Vol. 4, 1858—Guy's Hospital Report, Vol 5, 1859	
C. Foster	5	Jas. G.	M	4	Cicatrical	Middle ⅓	17 weeks.	Extremely emaciated	Died 4th day	Peritonitis.	No adhesion	Feb. 13, 1859	Med Times and Gaz., April 16, 1859	No peritonitis.
Sidney Jones.	6		F	44	Epithelioma.	Upper ⅓	One year	Sinking from starvation	Died in 36 hours	Exhaustion.	Adhesions	July 14, 1859	Trans. Path. Society, Vol 2, p. 101	Peritonitis caused by rupture of stitches.
Sidney Jones.	8		M	61	Epithelioma.	Middle ⅓	10 weeks	Extreme emaciation	Died in 32 hours	Exhaustion		March 16, 1866	London Hosp. Rep., Vol. .., 1866	No peritonitis.
Troup	9		M	50	Epithelioma.	Lower ⅓	12 months	Very thin.	Died 5th day	Exhaustion.	Partial adhesion	1867	Lancet, Vol 3, p. 218	No peritonitis.
VonThallen.	10		F	54	Epithelioma				Died in 47 hours	Exhaustion.		1867	Am Jour Med. Sciences, from Eden Med. Jour., July, 1872	
M. Mackenzie	11	Eliza L	F	42	Scirrhus	Lower ⅓	3 months	Progressive emaciation, with intense debility	Died in 36 hours			1867	Schmidt's Jahrbuchen, Vol 136	No peritonitis.
Durham	12	A. T.	M	70	Epithelioma	Middle ⅓	several months.	L st stage of exhaustion	Died in 16 hours	Exhaustion.	Union complete.	Nov. 1867	Med Times and Gaz., Aug 5, 1876	
Bryant	13		M	48	Syphilitic.	Upper ⅓		Dying of starvation	Died 6th day	Pneumonia.	Firm union.	Sept. 15, 1868.	Guy's Hosp. Rep., Vol 14, 1868	
F. F. Maury.	14	H. D	M	25	Syphilitic.	Lower ⅓	13 months	Emaciation extreme	Died in 14 hours	Exhaustion.			Bryant's Surgery, 2d Amer Ed	No peritonitis.
John Lowe	15	S. A. W	F	51	Malignant	Upper ⅓	2 years	Greatly emaciated	Died 3d day	Exhaustion.		1869	Amer Jour Med Sciences, April, 1870	No peritonitis.
MacCormac	16	H. S.	M	40	Cancer.	Lower ⅓	12 months	Weak and emaciated	Died in 45 hours	Exhaustion.	Union complete.	Sept. 24, 1869	Lancet (reprint), 1871, p 530	No peritonitis.
Thos. Smith.	17	A. B.	M	38	Epithelioma.	Middle ⅓	8 months	Not excessively exhausted	Died in a week	Peritonitis.	Adhesion.	March 19, 1872	Med Times and Gaz., 1872	No peritonitis.
Le Gros Clark	18		M		Epithelioma				Died in 6 days	Exhaustion.	Ad esion.	March 21, 1872	Med. Times and Gaz., 1872	No peritonitis.
Mason	19								Died.		Adhesion.	May 7, 1872	Med Times and Gaz., 1872	Peritonitis caused by cough.
Jacobi	20		F	52	Malignant				Died in 9 days	Exhaustion.			Amer. Jour. Med. Sciences, April, 1873	Cough caused adhesion to give way and slight peritonitis existed
Sidney Jones	21	Chas. L	M	67	Malignant	Upper ⅓	10 months	Greatly emaciated	Died in 40 days	Bronchitis.			New York Med. Jour., August and Sept., 1874	
Kuester	22		M	55	Malignant	Lower ⅓		Reduced beyond recovery	Died in 14 days	Exhaustion.	Firm union	March 3, 1875	Lancet (reprint) July, 1875	
Heath	23	J. L	M	47			3 months	Nutrition not impaired	Died in 20 hours.			1875	Vol 6, Transactions German Congress of Surgeons, 1877	No peritonitis.
Verneuil	24	R. M	M	17	Cicatrical	Lower ⅓	5 months	Greatly emaciated and almost exhausted	Living			Dec. 12, 1875	Med Times an Gaz., Aug 5, 1876	No peritonitis.
Mauler	25	Jas. W	M	57	Cancer	Middle ⅓	17 months	Greatly wasted	Died in 30 hours	Exhaustion.		1876	Lancet (reprint), 1877, p 185	No peritonitis.
Callender	26	Rob't B.	M	39	Cancerous Ulceration.	Lower ⅓	4 months	Greatly emaciated	Died in 91 hours	Peritonitis.		Oct 11, 1876	Med Times and Gaz., Nov 11, 1876	No peritonitis.
Trendelenberg	27				Cancer				Died in 14 days			Nov. 6, 1876	Medical News and Abstract, May, 1880	No peritonitis.
Trendelenberg	28				Cancer				Died in short time.				Lancet (reprint), 1877, p 317	Peritonitis.
Schede	29		F		Cicatrical				Died in 2 days	Collapse.		1876 (?)	British Med Jour., Jan. 14, 1879	No peritonitis.
Schede	30		F		Cicatrical				Died.				British Med Jour., Jan 14, 1879	No peritonitis.
V. Jackson	31								Died in 3 months	Asthenia	Union complete.	Feb. 27, 1877	Vol. 6, Transactions Congress German Surgeons	
Schonborn	32	S. H.	M	41	Carcinoma	Lower ⅓	5 months	Cachectic	Living		Union complete.	March 28, 1877	Same reference	No peritonitis.
Trendelenberg	33	Henry K	M	8	Cicatrical		4 months	Feeble and emaciated	Died in 26 days	Perforation of bronchus and esophagus	Firm union.	1877	Bryant's Surgery, 2d Amer Ed	No peritonitis.
Launelongue	34		M	59	Epithelioma	Middle ⅓	6 months	Emaciation extreme	Died in 2 days			1877 (?)	Vol 6, Transactions Congress of German Surgeons, 1877	No peritonitis.
Bryant	35								Died in 50 hours	Peritonitis		1877 (?)	Lancet (reprint), 1878 —Med Times and Gaz., May 5, 1877	No peritonitis.
Wemlechner	36		M	11	Cicatrical				Died in 30 hours	Peritonitis.		1877 (?)	Amer Jour Med Sciences, July 1877,	
Wemlechner	37		M	17	Cicatrical				Died in 7 days	Exhaustion and collapse	Union	1877 (?)	Bryant's Surgery, 2d Amer Ed p 441	Peritonitis.
Risel	38		M	52	Cancerous	Lower ⅓	4 months	Much emaciated	Died in 28 days	Inanition		1877 (?)	Medical News and Abstract, Mar, 1880	Peritonitis.
Bradley	39		M	15	Cicatrical		4 months	Emaciation extreme	Died in 7 months	From the cancer	Union complete.	Nov. 3, 1877	London Med Red., June 15, 1878, and Amer. Jour. Med Sciences, Oct, 1878	No peritonitis.
Howse	40				Epithelioma	Lower ⅓			Died in few days	Renal coma		Nov. 17, 1877	Med. Times and Gaz., 1878	No peritonitis.
Howe	41				Epithelioma				Died in weeks	From cancer	Union complete.	1878 (?)	Dr Parkes in Chicago Med. Jour. and Examine, Aug 1879	No peritonitis.
Howse	42				Epithelioma				Died in months	From cancer	Union	1878 (?)	same reference	No peritonitis.
Howse	43				Epithelioma				Died in months	From cancer	Union	1878 (?)	same reference	No peritonitis.
Howse	44		F	21	Cicatrical.				Died in few days	Renal coma	Union	1878 (?)	same reference	No peritonitis.
Davies Colley	45				Epithelioma.				Living.		Union	April, 1879.	Same reference	No peritonitis.
Davies Colley	46				Syphilitic				Died in few days	General prostration.			Same reference	Peritonitis.
McCarthy	47		M	61	Malignant				Living				Same reference	No peritonitis.
Langton	48		M	55	Cancer	Lower ⅓	5 months	Wasting rapidly and strength failing.	Died in 5 days	Pleuritis	Complete union.	Jan 8, 1879	Lancet (reprint), July, 1879, p 42.)	No peritonitis.
Herff	49	Jessie L.	F	6½	Cicatrical.	Upper ⅓		Cachectic and emaciated.	Died in 3 days.	Exhaustion.	Partial union.	Feb. 19, 879	British Med. Jour., March, 1879	No peritonitis.
Jessop	50		M		Cancer	Middle ⅓	1 year	Skin and bones.	Living		Complete union	Aug. 31, 1879	New Orleans Med. and Surg Jour., July, 1880	No peritonitis.
Skleffassowski	51		M	38	Cancer			Greatly reduced	Died in 36 hours	Shock		Nov., 1879	British Med Jour, 1880	No peritonitis.
Studsgaard	52				Cancer	Upper ⅓			Died in 20 hours	Pneumonia.	Complete adhesion	1879	Med News and Abstract, 1880—From London Med Rec	No peritonitis.
Kronlein	53		M	71	Cancer	Middle ⅓			Died in 6 months	From cancer	Complete union.	1879	Med Times and Gaz., June, 1880	No peritonitis.
Elias	54		M	46	Malignant	Lower ⅓			Died in 2 months	From cancer	Complete union.	1879	London Med. Record, Jan. 15, 1880, copied by Med. News & Abstract, March, 1880.	No peritonitis.
L. L Staton	55	Lewis L	M	8	Cicatrical.		1 year	Weak and emaciated	Living at last rep't			May, 1880	Med News and Abstract, Dec., 1880	No peritonitis.
T. F. Prewitt	56	Chas. Nash	M	62	Malignant		11 months	Dying of starvation	Living		Complete union.	June 17, 1880.	North Carolina Med. Jour., 1880	No peritonitis.
Geo Buchanan	57	W. B	M	60	Epethelioma.	Lower ⅓	9 months	Last stage of starvation	Died in 5 days	Exhaustion	Union	Sept 10, 1880		No peritonitis.
F. J. Lutz.	58	E. H.	M	53	Malignant	Lower ⅓	10 months	Greatly emaciated	Died 13th day	Asthenia	United	Oct. 27, 1880	Lancet, Eng. Ed., Jan 1, 1881	No peritonitis.
*Unknown	59		M	37	Cicatrical.	Lower ⅓	5 months	Extremely emaciated	Living		Union complete.	Nov. 15, 1880.	Letter from Dr Lutz.	No peritonitis.
									Recovered	Pneumonia	Firm union.	Unknown	Prof. Chas T Parkes, Chicago.—Found in dissecting-room	

NOTE.—For the references in the first 18 cases, I am indebted to a very excellent article, by Dr Poole, in the Richmond and Louisville Med. Jour., April, 1875. In every case I have, as far as possible, verified the references, not only in these, but all the others.

* A private letter from Prof. Chas T Parkes, of Chicago, states that he found a successful operation of gastrostomy in a cadaver brought into the dissecting-room this winter, of which, however, he could learn no history. The subject was a man about 37 years of age, the operation had evidently been done for a traumatic stricture, and the man had undoubtedly lived in good health for a considerable time after. The cause of death was evidently a pneumonia. I have tabulated the case as it is a successful one and not heretofore reported.

twenty-six days, one (Sydney Jones') forty days, one of Howse's a few weeks, one a few months, and another (also Howse's) seven months, one of Krönlein's two months, one (Trendelenberg's) ten weeks, one (Schönborn's) three months, one (Studsgaard's) six months, one (Elias's) was living at time of report, while Dr. Lutz's case is still living comfortably.

Of the twelve operated upon where cicatricial stricture existed six recovered, as also one of the three suffering from syphilitic stricture, a very gratifying result and surprising no doubt to those who have not looked into the subject.

Of the fifty-nine cases, nearly all were in a state of extreme emaciation and exhaustion when operated upon.

It is not claimed that this table is complete. Doubtless some fatal cases have not been reported and others have been overlooked.

It would appear from a review of the table, that gastrostomy, instead of being an extra hazardous operation, is a comparatively safe one. In but seven of the whole number is it stated that peritonitis, the *bête noir* of the surgeon who performs laparotomy for any cause, existed. In one of these it was caused by the giving way of the stitches; in another it was brought on by a severe cough, while in still a third case it was slight and is not assigned as the cause of death. Exhaustion alone is assigned as the cause in a large proportion of cases. Doubtless the shock of the operation was a factor in some of these, to which, however slight it might be, the starving, emaciated and exhausted subjects would offer but little resistance. In others, the fatal result was due to causes totally disconnected with the operation, such as perforation of the bronchus, pneumonia, pleuritis and bronchitis.

As an incidental feature, the position of the stricture possesses some interest. Where this has been stated in malignant stricture, six were in the upper, eight in the middle, and thirteen in the lower third of the esophagus;

while authorities tell us the most frequent site of cancerous stricture is the upper third.

In conclusion, the following propositions are submitted:

1st. All attempts at dilatation fail in a large proportion of cases of stricture of the esophagus.

2d. In very few of the cases does dilatation prove beneficial, and in a still smaller number curative.

3d. In malignant and ulcerative conditions catheterization is fraught with danger, and is *absolutely contra-indicated.*

4th. In cicatricial stricture it is permissible to attempt dilatation with soft, flexible instruments, incapable of perforating the esophageal walls.

5th. In cases of cicatricial stricture which have failed to yield to reasonable efforts at dilatation and in which the emaciation is progressive and starvation threatens, and in all cases of malignant and ulcerative stricture, as soon as solids cannot be swallowed, gastrostomy should be performed.

2126 Olive Street.

Detection of Arsenic in Wall Paper.—W. B. Hill states that the nitrate of silver test for arsenic in wall paper is not to be depended upon. He recommends the following: Take a sample three or four inches square (less will suffice with plain papers), cut into small pieces, moisten with concentrated sulphuric acid, and heat carefully until the paper is thoroughly charred. Let the charred mass cool, add to it about one fluid ounce of water, grind the black mass fine, that the water may come in contact with all parts of it, filter and wash. The arsenic will be found in the filtrate, which is examined by Marsh's test. All chemicals must be free from arsenic. A paper which, treated carefully in this manner, furnishes no arsenical mirror on porcelain does not contain any appreciable amount of arsenic.—*Boston Med. and Surg. Jour.* Jan. 13, 1881.

CASES FROM PRACTICE.

REMOVAL OF BOTH OVARIES BY ABDOMINAL SECTION, WITH HISTORY OF CASE.

By J. H. Van Eman, M. D., Kansas City, Mo.

Mrs. R——, æt. 36, native of New York, married, wife of a merchant.

First menstruated at the age of eleven years. Was awakened at night by violent pains in back and pelvis. Has had severe dysmenorrhea all her life. Married when about 20. Has never been pregnant. Has had catarrhal disease for many years, affecting more particularly the nasal passages and alimentary canal. Has had cervical uterine leucorrhea at times. Five years since had a small uterine polypus, which was removed without difficulty. Her dysmenorrhea being of an obstructive character, she has been treated by the gradual dilation method. In the spring of 1879 I divulsed the uterine canal. She has been treated by a number of physicians, both east and west. All treatment failed to give relief. Instead of getting better, she gradually grew worse. She is of a decidedly nervous temperament. Some five years since, while under treatment for uterine trouble, some very singular nervous symptoms manifested themselves. She first complained of a queer, trembling, twitching feeling in the pelvic region. This feeling, more disagreeable than painful, grew worse and worse, and was soon followed by a rythmical contraction of the psoas and iliacus internus and other muscles concerned in flexion of the thighs upon the abdomen. This involuntary flexion of the thighs would continue with violence and perfect regularity for hours, unless controlled by profound anesthesia. Large doses of morphia, hypodermically, controlled these movements, but did not entirely remove them. If, when she felt the first intimation of one of these attacks, she took an enema containing

belladonna, or a large dose of asafœtida per orem, and kept perfectly quiet in bed, the attack would be warded off. Morphia, and in fact all narcotics, were very badly borne. The inhalation of chloroform almost always produced violent vomiting, which would continue for many hours. These convulsive attacks assumed the greatest intensity during her menstrual periods, but were liable to occur at any time from over-exertion or mental worry. During the last year or two an ordinary action of the bowels would bring on an attack, unless she would lie down and remain quiet for an hour or so. About the 1st of February, 1880, she decided, as a dernier resort, to undergo an operation for the removal of the ovaries, having lost all hope of any less radical treatment effecting any good, and life being a burden to her under the existing condition. On the 5th of February I performed double ovariotomy upon her at the Sisters' Hospital, Kansas City, Mo., assisted by Drs. Todd, Schauffler, Johnson and Bogie. Ether was chosen as the anesthetic on account of the gastric trouble produced in her case by chloroform. Abdominal section was chosen as the form of operation on account of the possibility of extensive adhesions, and on the further ground that in the operation by abdominal section (though perhaps somewhat more dangerous), you are much more certain to be able to complete the operation, and at the same time, if your patient recovers, you are much more likely to effect a cure. An incision, nearly five inches in length, was made in the linea alba down to the peritoneum. After all oozing had ceased, the peritoneum was pinched up and a small opening made and then enlarged on a grooved director. Some difficulty was experienced in bringing the right ovary to the edge of the incision on account of the adhesions. The left ovary was easily brought out. There were small parovarian cysts on both sides. The left ovary had a healthy appearance. In the right was a cyst the size of a large hazelnut, which was broken open in getting out the ovary. The ovaries were isolated from the surrounding tissues. Carbolized silk ligatures were passed around the ligaments close to the ovary, drawn tight and cut short, the pedicle was severed and returned to the pelvis. The pelvic cavity was carefully sponged out. The incision was closed with silver wire sutures passed through the peritoneum and all the overlying tissues. Two

superficial silk sutures were also used, one at the lower and one at the upper end of the incision. Adhesive strips were then applied, next cotton and then a compress, the whole secured by a scultetus bandage.

The operation was completed and the patient put to bed at 2 P. M., a little over an hour being consumed in the operation. Feb. 5, 3 P. M. Pulse 78; 7 P. M., 75; Temp., 99⅕°. Has had severe pains in abdomen since 3 P. M., and some vomiting. ℞ McMunn's elixir of opium, gtts. xl, every two to four hours, according to pain.

Feb. 6, 1.30 A. M. P. 75.; T. 100°; pain still severe, violent retching and vomiting. 9 A. M., P. 75; T. 100⅕°. Gave ʒi. of sub nit. bismuth every hour or two during the after part of the night, also small quantities of milk and lime water—3–1. 11.30 A. M., pain much less. Had 40 drops elixir opium at 9 A. M. and 2 P. M.

1 P. M., P. 75; T. 100⅘°.

8.30 P. M., P. 80; T. 100½°.

Kidneys acting well, some nausea, no vomiting since 12 M. Passed first flatus from bowels. Comparatively comfortable.

Feb. 7, 7 A. M. P. 68; T. 99⅕°; skin moist. Took opium at 10 P. M. last night. Rested well all night afterwards. Menstrual flow began in the night. 1 P. M., P. 77; T. 100°; very comfortable. 9.30 P. M., P. 72; T. 99⅘°; no pain; quite comfortable.

Feb. 8, 8 A. M. Had a good night. P. 70; T. 98⅘°. 7.30 P. M. P. 68; T. 99⅕°. Complains of feeling tired.

Feb. 9, 8 A. M. P. 70; T. 98⅗°.

Feb. 10. Complained of headache and general bad feeling; Room too warm.

Feb. 13. Removed all the sutures. Wound has healed by first intention, excepting a small portion a little above the center and about one-fourth of an inch above the lower portion. This latter portion of the incision does not look well.

Feb. 14. A little suppuration at lower portion of wound. Moved bowels with injection. Drew off urine with catheter for the first ten days after the operation. Patient improving gradually.

March 7. Thirty days after the operation the patient was sent home.

From this date she seemed to do well in all respects save one. The incision had healed perfectly, excepting about one inch of the lower third. This portion would appear almost well, except an unusual amount of induration in its immediate vicinity. She would have light chills, or at least chilly feelings, with pain, heat, redness and swelling at that part of the wound, when it would open and pus be thrown off. The inflammatory condition would then, to a great extent, subside. This occurred again and again. In the latter part of May everything was cleared up. While dressing the wound she found something that had a pointed end projecting from an opening nearly an inch from the edge of the incision. On forcibly removing this it was found to be one of the silver sutures, which in the violent vomiting that had occurred in the first thirty-six hours after the operation, had broken off at both sides, close to the skin, and had at once disappeared from view. This source of irritation removed, the patient's general condition very rapidly improved. In a like operation I would advise a careful counting of the sutures, which I neglected to do, but I shall not err in that direction again.

Now as to results. I saw this lady Dec. 17, 1880, ten and a half months after the operation. She is doing her own work. Has had no menstrual discharges since immediately after the operation. Has had no return of the convulsive movements and not the slightest symptoms of them. If she works too hard she has some pain in the pelvic region, at times pretty severe. She has improved greatly in personal appearance and flesh, and is once more able to take some enjoyment in life. Although not so strong as she once was, is yet gradually regaining her health and strength.

Kansas City, Mo., Jan. 13, 1881.

PREPUTIAL CALCULUS.

By A. G. Buchelmann, M. D., Villa de Mesquitz. Mexico.*

I was called to see an old Mexican shepherd, about 60 years of age, who said that he had a great deal of trouble in passing

* From a letter to Dr. Jno. T. Hodgen, St. Louis.

water, and there seemed to be something stopping up the canal. On examining the penis I found a phymosis, with the preputial orifice very small, and a great deal of cicatricial tissue in the prepuce. The phymosis had existed from childhood. About three or four years ago he had commenced to pass small calculi, some of which gave him a great deal of pain and trouble to pass, but by squeezing the penis and, also helping along with little sticks, he could at last succeed in expelling them; especially with one he suffered a great deal, because it was large and ragged.

I passed a probe into the small orifice and felt it grating on a calculus, which, on slitting up the prepuce, was easily extracted. It lay with the flat side towards the orifice, and the cup-shaped cavity with the little ball in it, towards the meatus.

I have never again seen the man; I suppose he has left here.

MEASUREMENT OF STONE.

Circumference of small stone, which is polished and rounded by constant turning in the facet upon the larger one, was 3½ centimetres, (1.37 inches). The larger fragment, which is somewhat triangular in shape, has the circumference of 53 millimetres, (2 inches). Its facet is large enough to embrace about one-fourth of the small one. This surface is also polished.

EDITORIAL.

Vol. V. March, 1881. No. 3

THE ACTION OF ANESTHETICS.

In 1877 a committee was appointed, at the meeting of the British Medical Association, to investigate and report upon the action of anesthetics. This committee, which has also been known as the Glasgow Committee, on account of the residence of its members in that city, has presented reports from time to time giving results of certain series of investigations; and at the last meeting they presented a report of all the work done up to that time.

This report is published in full in the *British Medical Journal*, Dec. 18, 1880.

One of the first points determined by their experiments was, that chloroform has a paralyzing influence upon the heart as well as upon the respiratory center, while ether has no such influence upon the heart.

An attempt was made by the committee to find some other agent which should have the efficiency and promptness of chloroform and affect the heart and respiration as little as ether.

They tested twelve different agents and found only two that afforded sufficient promise of favorable results to induce them to follow out further investigations concerning them. These were isobutyl chloride and ethidene dichloride, and their inquiries were soon limited to a comparison of the latter with chloroform and ether.

Dr. Snow, of London, was the first to employ ethidene as an

anesthetic, which he had done successfully in fifteen cases several years ago. He had found difficulty in obtaining it pure, and thought this might prevent its coming into general use. It had also been used by some of the German surgeons. Since the committee called attention to this anesthetic, in January, 1879, it has been used quite extensively, and Mr. Clover has published a paper giving the results of his experience in 1,877 cases. Mr. Clover calls attention to its depressing influence on the heart, which is also noted by the committee further on in their report.

The work of the committee has been carried out most carefully and thoroughly, and they have made use of apparatus in some cases of very complicated structure, and the adjustment and manipulation of which required the utmost tact and skill.

The report which they rendered gives a detailed account of several series of experiments, with illustrations of the apparatus employed, and tables showing the results attained and numerous tracings of the pulse under the use of the anesthetics in different circumstances; and closes with a summary of the conclusions attained.

Among these conclusions are the following: Viewed from a clinical aspect, they find that a larger dose of ethidene (administered on a towel) is required than of chloroform, but that the latter agent requires more time to induce anesthesia.

The number of cases of sickness and vomiting is about the same with the two agents, but the duration is longer with the chloroform; and there is no relation between the occurrence of these symptoms and the duration of the anesthesia, or the quantity of the anesthetic.

With both agents the pulse-respiration ratio is considerably altered in a certain number of cases, the pulse falling as the respiration increases in rapidity. The change is more marked and occurs more frequently with chloroform than with ethidene. There is also a greater tendency to retardation of the heart's movements and to dicrotism.

Viewed from the physiological standpoint:

I. The effect of anesthesia with chloroform is to increase the amount of carbonic acid inhaled in a given time.

II. Both chloroform and ethidene, administered to animals, have a decided effect in reducing the blood-pressure; while ether has no appreciable effect of this kind.

III. Chloroform reduces the pressure much more rapidly, and to a greater extent, than ethidene.

IV. Chloroform has sometimes an unexpected and apparently capricious effect on the heart's action, the pressure being reduced with great rapidity almost to *nil*, while the pulsations are greatly retarded, or even stopped. This seems to be a source of serious danger to life—all the more, that in two instances it occurred more than a minute after cessation of the administration of chloroform.

V. Ethidene reduces the blood-pressure by regular gradations, and not, so far as observed, by these sudden and unexpected depressions.

VI. Chloroform may cause death in dogs by primarily paralyzing the heart or the respiration, in some animals the cardiac, in others the respiratory centers being most readily affected.

VII. In most cases respiration stops before the heart's action.

VIII. The use of artificial respiration was very effective in restoring animals in danger of dying under the influence of chloroform.

IX. Under the use of ethidene there was on no single occasion an absolute cessation either of the heart's action or of respiration, although they were sometimes very much reduced; whence it may be safely asserted that this agent is far safer than chloroform.

The practical conclusions which the committee draw from their observations are, that it is necessary to watch the effect

of an anesthetic both upon pulse and respiration, and that we must not only take account of the danger of the sudden stoppage of the respiration, but must also observe that, in case of abnormal increase in rapidity of respiratory movements, a temporary discontinuance of the administration may be necessary for safety.

Secondly.—Owing to the tendency of chloroform and ethidene—particularly chloroform—to suddenly lower the blood-pressure, not only during the administration of these agents, *but also after they have been stopped for some little time,* we should watch for symptoms of such lowering of blood-pressure for some time after the patient has recovered from its more evident effects, as well as during the time of administration.

Thirdly.—They urge the importance of artificial respiration as a restorative means, even in cases where all cardiac action has ceased.

As regards comparative danger, the three agents rank as follows: chloroform, ethidene and ether; and circulation can be re-established most readily when it has ceased under the influence of ether, then ethidene, and with the least readiness when produced by chloroform.

The committee consider that the dangers of chloroform more than counterbalance the advantages which it possesses over ether, and they think that ethidene obviates, to a very great extent, both the dangers of chloroform and the disadvantages of ether.

QUARANTINE ADMINISTRATION OF THE LOWER RIVER.

After an almost fruitless session of some days' duration, the quarantine convention called by the Louisiana State board of health to meet at New Orleans on Dec. 7th last, coincidently

with the assembling of the American health association, adjourned to meet at Savannah, Ga., next year; for, following much discussion, all questions relating to inland and interstate quarantines, the regulation of domestic travel and traffic, and the respective and reciprocal relations of state boards of health and the national board were referred to two committees of seven members each, one composed of representatives from seven Atlantic seaboard states, and the other composed of representatives of seven states in the Mississippi valley, the committees to report at the adjourned meeting in November.

It was to be hoped that a longer step toward a satisfactory and authoritative solution of these important problems would have been taken by the body; as it is, the result seems but a lame and impotent conclusion to a meeting of which much more was rightly to be expected. Nothing was settled, and in the event of pestilence the coming warm season, the same uncertainty and distrust of local health authorities will obtain as in former years.

Conflicts and acrid differences of opinion between bodies or persons entrusted with the care of public health, are always to be deplored, particularly at times when the general safety is perhaps endangered by encroaching disease. Notwithstanding efforts made to mask it, a careless onlooker even could not have failed to perceive that a feeling of something like resentment was felt by a majority of the Louisiana board officials toward the national board—all seemingly because of certain occurrences of the preceding summer, which came to pass in connection with the quarantine administration of the lower coast, and suspicious cases of fever observed thereon at that time. The feeling seemed to be that the latter body in taking official cognizance of the disease, and declaring its nature as credibly represented by its authorized agents for the information and guidance of other valley states, had infringed upon certain presumed local rights, and transgressed the proper bounds of its authority in so doing.

This journal, by virtue of its sponsor, might claim, in referring to this phase of the matter, to represent the entire valley, but waiving any such claim and speaking only for its native commonwealth, it cannot but assert and maintain that so far as the sanitary control of the lower river is concerned the State of Missouri has a co-equal right with the State of Louisiana to declare and have respected her wishes and preferences in a matter that so nearly touches her hygienic and commercial interests. Probably four-fifths of the water that passes the mouth of the Mississippi washes the soil of this State, which fact alone would seem to give her a vested right in that waterway to its outlet, and an inherent interest in all measures supervisory of its course, channel and business. It is to her an avenue of prosperity and possibly of plague and panic, and its hygienic administration must be committed to those hands in which she reposes the greatest confidence, and which are endowed with authority ample to meet most broadly and successfully all the necessities and contingencies of epidemic seasons at their entrepots and critical points in this valley. Past experience has fully shown the need for a responsible body, as nearly impartial as may be. possessed of authority to deal in no piece-meal fashion with imperiling diseases, and whose official utterances shall command the widest confidence; and so far as this state is concerned, she is fully prepared to entrust to national authority the discharge of the important and delicate task of the oversight of her southern gateway to insure protection to her health and commerce from febrile incursion or epidemic interruption. And this position is taken not from any belief that the Louisiana state board has in anywise been remiss in the performance of its duty as the members saw it, or that any other state board or body could have done more or better, but simply and solely by reason of the fact that it is a local body, and that its power is not equal to the comprehensive and difficult task which the full requirements of the situa-

ation demand. As one man can not well do the work of twenty men, so neither can, nor should one state do, or assume to do, what twenty states have a right to claim an equal share in doing. To properly direct and supervise the public health administration of the lower river, there is needed the co-ordinating power of all the states as represented by a national board; in this way only can precipitate, discordant and harassing quarantines be avoided, and until such authority has needful sway, this state, and doubtless many other valley states, is prepared to vote a want of confidence in any local or state plan of gulf, coast or river quarantine.

The Antiseptic Cat-gut Ligature.—Dr. Lewis A. Stimson, in an able communication, compares the results obtained from the use of the cat-gut ligature with those of the silk ligature, and gives the preference to the former in point of actual safety, as shown by statistics of the two when employed in similar operations. It is held that an examination of the vessels, after using the cat-gut ligature, shows that it does, as a rule, divide the artery completely, that it occasions much less irritation than the ordinary thread, that it may become encysted or absorbed, or it may exceptionally be cast off by ulceration; but even in this case it occasions less local reaction than the silk cord. The fears of the softening of the ligature prematurely are shown not to be founded on fact, and subsequent swelling may be obviated by placing the ligatures in carbolized water before the operation. Finally, a preference is expressed for applying the antiseptic cat-gut ligature in a single cord, around the artery, with sufficient force to divide the inner and middle coats, because it is more certain to accomplish the object of the operation, and because the danger of secondary hemorrhage, sought to be avoided by leaving the coats unbroken, does not appear to be sufficiently great to make it worth while to incur the risk of failure to accomplish the principal object of the operation, that is involved in the proposed modification.—*Am. Jour. Med. Sciences,* January, 1881.

BOOK REVIEWS AND NOTICES.

Diagnosis and Treatment of Ear Diseases. By Albert H. Buck, M. D. Aural Surgeon to the New York Eye and Ear Infirmary; Instructor in Otology in the College of Physicians and Surgeons in the City of New York. *New York: Wm. Wood & Co.* 1880. 8vo., pp. 411. Cloth.

This is the eleventh volume of "Wood's Library of Standard Medical Authors," for 1880. Any work which details conscientiously and faithfully a writer's experience, cannot fail to elicit interest. Dr. Buck has truthfully presented, as he states in his preface, "a picture of ear diseases as they have appeared to him in private and hospital practice."

His successes and failures have alike been recounted, which makes the book peculiarly his own. The first chapter on the physiology of the organ of hearing, in its illustrations and its original treatment of the subject, is so interesting that most readers will regret that it is not more exhaustive and that the anatomy of the ear has not been more thoroughly considered. Indeed we are inclined to think that this omission has been an error on the author's part, and presupposes an acquaintance with the ground-work of this study which is not warranted. This information however is easily obtained in such admirable text books as Roosa's, and Burnett's which the author has not designed to supplant; and in this view of the case, if there is a demand for a work devoted to aural practice, it speaks gratifyingly for the interest that is felt in the advance of this department by the general profession and students in medicine to whom the book is addressed.

We shall not undertake anything like an exhaustive review of a volume of over four hundred pages in the space at our command. It will be sufficient, noting the arrangement and contents, to touch upon those points which commend themselves to our favor or do not accord with our experience or observation. On page 31, under the head of "instruments and methods of examination," we cordially approve what is said of the curette and forceps as in lieu of the syringe in the removal of

foreign bodies *et cetera*. We have known of very serious injury having been inflicted upon the ear by the use of the syringe when an after experience with the case proved that this instrument could and should have been dispensed with. We cannot excuse either such a procedure on the ground that the operator had not the "requisite degree of manual skill and delicacy of touch," which would have enabled him to employ the proper instruments. Without this, we should consider, it would have been wiser to have spared his reputation and his patient the danger to which he was exposed at uneducated hands.

The author's views on the etiology of eczema auris harmonize with what is found to obtain in practice, notwithstanding the unfavorable criticism which they have excited.

If this disorder is not associated with malnutrition, we as certainly expect to find a naso-pharyngeal complication as we look for this condition in cases of impacted cerumen, and as a reflex process it is not without analogy Pages 74–86, which treat of acute and chronic diffuse inflammation of the meatus, are interesting and instructive. The difficulty in making nice diagnoses, which has led the author to group under this one head, *otitis externa diffusa, periostitis, eczema* and *otomycosis,* suggests an embarrassment which we presume most aural surgeons have at times experienced.

It is with some surprise that we note under the head of treatment of aspergillus this observation, "as for alcohol I could not satisfy myself that it possessed any special advantages as a local remedy in this disease."

In our hands in a very large number of cases this agent has proved an unfailing remedy, so that we are ready to believe, if there is a specific in medicine, alcohol sustains this relation to otomycosis. Dr. Buck recommends iodoform as a parasiticide.

Chapter V., on methods of examining the middle ear, is full of very valuable suggestions to the student.

Diseases of the middle ear are considered at length in chap. VI., and VII., occupying 138 pages, profusely illustrated by cases from practice. The author is conservative, and evinces an accuracy and care in his observation and deductions which give great value to this interesting portion of his work.

The remaining four chapters treat consecutively of fractures

of the temporal bone, diseases of the mastoid process, miscellaneous conditions of the drum membrane, ossicles, and tympanic cavity, and different forms of aural disease in which the labyrinth is believed to be involved.

H. N. S.

A Treatise on Diphtheria. By A. Jacobi, M. D., Professor of Diseases of Children in the College of Physicians and Surgeons, New York. *New York: Wm. Wood & Co.* 1880. 8vo., pp. 234. Cloth.

The author has here brought together in book form the instructive contributions he has for some years been furnishing the profession through medical periodicals, and we have the result of more than twenty years' careful, judicious observation and study of many thousands of cases, as well as a thorough knowledge of all the literature of the subject.

The volume is divided into nine chapters. The first, entitled History, commences with the definition and synonyms, including "*synanche* and croup," thus at once declaring the author as adopting the view common, but still in dispute, that true "membranous croup" is laryngeal diphtheria. Chapter II, upon Etiology, passes in review the theories, experiments and deductions of those who have endeavored to discover the originating cause of the disease, and, of course, is largely devoted to the "parasitic" and "non-parasitic" doctrines. The summarized result is, "not proven." Chapter V—Symptoms—contains a thorough analysis of this most important matter, describing with minute care the appearance of each visible seat of the disease and the complications of the internal organs; of particular interest is the symptomatology of the nervous system.

In the chapter upon "Anatomical Appearances" the author says, in relation to the identity or non-identity of croup and diphtheria, "In my opinion, it is just as little possible to differentiate these diseases according to the seat of the morbid product as it is justifiable to deny the title diphtheria to membranous pharyngitis, when few general symptoms, such as fever, debility and collapse, happen to be present."

In support of this view, and in the light of the fact that the local pathological conditions in exudative disease affecting the larynx and vocal cords and the soft parts of the mouth and pharynx are undistinguishable, the author

directs attention to the pathological and physiological differences that serve to modify the disease in these different sites; and cases have fallen under the reviewer's observation which tend strongly to confirm the conclusions of the author, entirely contrary to the position formerly held of non-identity.

The chapter upon diagnosis is particularly directed to the abolition of the discrimination between "croup" and "diphtheria," and the very important and misinterpreted differentiation is forcibly dwelt upon, i. e., the presence or absence of fever in laryngeal attacks. High fever and croupal cough does not usually announce "membranous" or "diphtheritic laryngitis," but catarrhal laryngitis, a disease which "yields a good prognosis," whereas absence of *high* fever often accompanies the diphtheritic disease. According to Jacobi, "one of the pathognomonic symptoms of diphtheritic laryngitis, 'membranous croup,' is the relative *absence* of fever." The early appearance of albumen in the urine is noted as a valuable diagnostic point between diphtheria and scarlatina; in the former "it is pretty sure to appear, if at all, within the first few days;" whereas in scarlatina it is rarely seen before the ninth or tenth day, usually later.

The discussion of treatment is lengthy, all the different suggestions being reviewed. The author cautions against the too free use of potassium chlorate, by reason of the danger of nephritis. He considers the beneficial action of this drug chiefly as preventive of extension to healthy surfaces. The chloride of iron is recommended in frequently repeated doses; and inhalation of the vapor of turpentine, with which the air of the apartment is kept saturated by pouring a teaspoonful of the oil or spirits upon the surface of boiling water, is commended as very beneficial.

Mercurials in frequent small small doses, or by friction with the oleate, are, at times, of advantage in cases which assume more the purely inflammatory character with less constitutional debility and collapse, as in "sporadic croup," or in fibrinous tracheo-bronchitis.

In the treatment of the laryngeal diphtheria or membranous croup, we have nothing new advanced but a confirmation of the old methods. Tracheotomy is regarded as a last resort only; "when there is danger from suffocation through stenosis of the larynx, there is indication for tracheotomy."

The work as a whole is of great value as an impartial criticism of all that has been written upon the subject, fortified by the well-digested practical knowledge of the writer.

The mechanical execution is all that could be desired.

G. A. Moses.

How to Use the Forceps. By Henry G. Landis, A. M., M. D., Professor of Materia Medica and Diseases of Women in Starling Medical College. Illustrated. *New York: E. B. Treat,* 757 Broadway. 1880. 12mo., pp. 168. Cloth, $1.50. (Through the Hugh R. Hildreth Printing Co.)

This little volume we have read with interest, and commend it to all who have occasion to make use of the forceps, or, rather, to all who attend midwifery cases. In the first half of the volume the author discusses the mechanism of labor; and takes issue with the teachings of those who have been for years considered the leading authorities in obstetric practice and teaching.

He regards the pelvic cavity as composed of two tubes which coincide at the outlet, but are quite distinct at the inlet; and he explains the various phenomena of the mechanism of labor in accordance with the relation of the child's head to one or the other of these tubes. It seems to us that this account of the mechanism of labor is really simpler, more satisfactory and truer than that which is given in the text-books.

With reference to the choice of instruments, he expresses his preference rather dogmatically for the Davis forceps. He considers the forceps chiefly as a tractor, in which he is unquestionably correct, and we think he rather overestimates the compressing power of the forceps. He speaks pretty strongly when he says: "Any use of the forceps which implies a leverage upon the sides of the obstetric canal, i. e., upon the mother's tissues, is unscientific, dangerous and criminal."

He recommends the dorsal position as most convenient and as facilitating the operation in all cases, and insists, very correctly, upon the importance of applying the blades upon the sides of the child's head, thus giving the most efficient control of the head, and at the same time guarding against injury of either the head or the mother's soft parts. He seems, however, to underestimate the difficulties met in applying the instrument at the inlet.

One little point we notice in regard to the mode of holding the blade in introducing it. He says: "The handle of the forceps should be securely grasped in the left hand; not held like a pen, which, for an object of its weight, gives an insecure hold, but held firmly so that it can be introduced with precision. A firm hold does not imply a forcible use, but, on the contrary, the ability to grade force with entire delicacy."

He very properly condemns the method of traction by which a considerable portion of the power is expended in pressure upon the pubis by making traction upon the handles of the forceps, sometimes even bracing the foot or knee against the bed and dragging with the whole weight of the body.

He characterizes the Tarnier forceps as unnecessarily ingenious, and directs traction to be made with the ordinary forceps by seizing from above with the right hand the handles of the forceps after they have been applied at the inlet, compressing the head as little as possible, while at the same time the left hand is so placed that the ball of the thumb comes over the lock, while the index finger rests upon the upper arm of one blade and the middle finger upon the other. Now, while the right hand holds the handles almost at rest, the fingers of the left push upon the blades so as to move them and the contained head downwards, backwards and a little to the left of the median line. Secondly, while the fingers are pushing downwards in this way we may also make use of them as a fulcrum, and, by elevating the handles, cause the blades to move in an opposite manner, but care must be taken that the force thus applied by the right hand is not enough to overbalance the downward pressure of the left, else we will merely extend the head without propelling it. * * * * Pushing and not pulling is the first step in traction. When the head begins to descend, we may place three fingers between the blades, the thumb and little finger being on the outside, and combine a pulling with a pushing motion upon the blades." He finds this method efficient in the class of cases where the forceps are applied on account of uterine inertia, probably the largest proportion of the cases in which the instrument is used. In cases where more force is necessary than can be exerted through the fingers in this way, he says "that we may pull upon the handles with the right hand, and with such force as may or can

be exerted, while, at the same time, we endeavor to deflect the force in the proper direction by pushing upon the blades in front of the lock with the left hand. * * * But under no circumstances will it be necessary to pull upon the handles with both hands, or put the foot against the bed, or secure additional help in traction. If the force which can be exerted in the right direction in this way is incompetent to deliver the child, no amount of force wrongly applied will succeed without injuring the maternal tissues to an unjustifiable extent."

As to the time when to use the forceps he gives, as a general rule, that whenever the second stage of labor has lasted two hours, and the head is still stationary or advancing with great slowness, we may apply the forceps and so relieve the patient of prolonged suffering.

The last few pages are devoted to a consideration of the question as to the application of the forceps in cases of deformed pelvis, he taking the ground that this is preferable to version in most of these cases. E. M. N.

Drainage for Health, or, Easy Lessons in Sanitary Science. By Joseph Wilson, M. D., Medical Director U. S. Navy. *Philadelphia: Presley Blakiston*, 1012 Walnut Street. 1881. 8vo., pp. 68. Cloth, $1.00,

The publisher of this volume has done himself credit in its appearance. The cover looks inviting, the paper is good, the type excellent and the engravings, artistically, all they should be. But here we pause: a sanitary Pecksniff appears in the very preface, and this character in an aggravated degree is maintained to the end of the sixty-six pages. An unconscionable jumble of misused words, truisms, crudities, vicious counsel and flat nonsense, not to say ignorance, is here presented that would astound and disgust even a beginner in sanitary knowledge. Surely there is much of value in the present yield of the youthful and expanding science of hygiene, else such a spurious issue could not appear.

The first chapter undertakes to discuss the drainage of land, and is longer and therefore not less atrocious in style and substance than any of the four the book contains. The adjective "elegant" finds special favor with the dilettante author, and is applied freely to fields, springs, farm-houses, etc. Hills are spoken of as being healthy. About the only seemingly

original idea the volume contains is in this chapter, where it is stated that "the *one great thing* would be a grand canal, similar to that of China, to connect Boston harbor with the Rio Grande"—this for the purpose of draining the Atlantic and Gulf seaboards!

The value of the author's opinion as regards the stoppage of sewer gas may be inferred from the remarks on page 50, that "if typhoid germs, like so many minute frogs, hop into the water of the trap on one side to jump out at the other side, nothing can be more effective than a check-valve, the sewer-gas check-valve as we *see it advertised among plumbers' supplies.*"

In chapter III, which is devoted ostensibly to the drainage of cities, a long and pedantic array of names of intestinal parasites is given, in the midst of which appears this touching gem of reproachful sanitary contemplation: "Cruel Dr. Leuckhart to coax these lambs and rabbits to eat bits of tape-worm and then knock the poor things on the head and cut them into such little pieces merely to see what had become of the hateful mess"—whereat we weep. And our tears flow afresh, we bemoan ourselves and refuse to be comforted when we read further, on page 57, that "the human intestines, and nearly all parts of the body, are infested by many deadly animals besides tape-worms." Terror is thus added to tears, we clasp our perishing body and give up to despair, for we can already almost feel these ravening monsters rending and devouring with great impartiality and voracity both our vitals and our victuals!

Lessons in plumbing, with which the treasure closes, are rich in their way, and the conclusions are drawn with all the acumen and gravity of a Dogberry; indeed, in endeavoring to account for the appearance of the volume, we have a mind to shrewdly suspect, on the part of the accomplished publisher, a deep-laid joke at the expense of the author, of true sanitary science and the public, for, in the hope of wide and favorable publicity, the former has doubtless been entrapped into writing himself down very much after the injunction of that Shaksperean worthy to his clerk. But, having enjoyed the result of his jocoseness, for the sake of the two latter victims of his waggery, the hope may here be expressed that the genial publisher will now desist, and that in the future all fruits of spurious

sanitary pregnancies, instead of seeing the light of day in print, will be quietly, but firmly and decently, inurned in the ash heap.

A Manual of Medical Jurisprudence. By Alfred Swaine Taylor, M, D., F. R. S , etc., etc., etc. Eighth American Edition, from the Tenth London Edition, containing the author's latest notes, made expressly for this edition. Edited, with additional notes and references, by John J. Reese, M. D., etc. *Philadelphia: Henry C. Lea's Son & Co.* 1880. 8vo., pp. 933.

No additional notice is necessary in the announcement of a new edition of the late Dr. Taylor's work on Medical Jurisprudence. Having passed through ten editions in England and eight in this country, its value is well understood both by physicians and lawyers, and it is recognized as a standard authority on the subject.

The revision of this edition was the last work in which the author was engaged, and not a few additions to the previous editions were made by his hand. In addition to this the American editor has made quite numerous notes that adapt the volume better to the uses of American readers.

This is one of the volumes which the publishers, Henry C. Lea's Son & Co., have fitted with the new half Russia binding, making it a very handsome as well as serviceable volume.

A Practical Treatise on Surgical Diagnosis. By Ambrose L. Ranney, A. M., M. D. Second Edition, Enlarged and Revised. *New York: Wm. Wood & Co.* 1880. 8vo., pp. 471. Cloth.

The author has greatly improved this work by the careful revision to which he has submitted it in this its second edition. To the differential tables contrasting the symptoms he has added in each section some pages of descriptive text, giving concisely an outline of the causes and symptoms of the more important diseases.

Dr. Ranney has carried out very effectively in this volume the plan of diagnosis by contrasted symptoms, and while there are limitations to the application of this method, the volume is one that will be of material assistance to the surgeon as well as to the student.

The publishers have done their part of the work well, and we think that Dr. Ranney's work will meet such favor with the profession that they will be called upon for repeated editions.

ROCKY MOUNTAIN HEALTH RESORTS. By CHARLES DENISON, A. M., M. D. Second Edition. *Boston: Houghton, Mifflin & Co. The Riverside Press, Cambridge.* 1881. 16mo., pp. 192. Paper.

It is but a few months since we gave to our readers a notice of this volume of Dr. Denison, which has come out now in a second edition. The work is the result of careful studies by the author, who has enjoyed unusual opportunities for investigating the subject of which he treats.

To the specialist in pulmonary disease, and to the general practitioner under whose care come so many of those cases of phthisis and other pulmonary troubles, the subject of climatic influence is one of great interest and importance, and such will read with interest and profit Dr. Denison's contribution to this subject.

FOOD FOR THE INVALID, THE CONVALESCENT, THE DYSPEPTIC, AND THE GOUTY. By J. MILNER FOTHERGILL, M. D., etc., etc., Edin., and HORATIO C. WOOD, M. D., Professor of Materia Medica, etc., in the University of Pennsylvania. *New York: McMillan & Co.* 1880. pp. 150.

Here we have another addition to the nurse's library, with a goodly portion especially devoted to the science of nutrition, teaching the reason why certain articles of food and special modes of preparation are proper or the reverse.

The recipes will often cause surprise to the American physician or nurse, as very many of the mixtures are so entirely foreign to our knowledge or palates. Still no doubt they are good and proper, and the little book should be very popularly received.

OPHTHALMIC AND OTIC MEMORANDA. By D. B. ST. JOHN ROOSA, M. D., and EDWARD T. ELY, M. D. Revised Edition. *New York: Wm. Wood & Co.* 1880. 32mo., pp. 298. Cloth, $1.00.

This little volume may, perhaps, have a considerable sphere of usefulness in the hands of students who are attending lectures and are preparing for examination. Special care seems to have been taken in compiling the anatomical notes. It is not a work that can be of more than trifling value to the practitioner.

TRANSLATIONS.

INDICATIONS OF VOMITING IN PHTHISICAL PATIENTS.

M. Le Dr. Ferrand, Hopital Laennec.

It has an important diagnostic value, we say. In fact, Bourdon and Pidoux assert that the vomiting which follows cough, otherwise called the "nauseous cough," generally announces the threatening of tuberculosis, if not confirmed tuberculosis.

It has considerable prognostic value. In fact, any phthisical patient who coughs a part of the day and of the night, and who expectorates abundantly, is in a very unfortunate condition; but that one who vomits has against him two causes of weakening instead of one, since the vomiting prevents him from repairing the losses to which he remains exposed besides, like the preceding. This accident is sometimes so serious as to become even the cause of death. Andral cites the example of a patient who succumbed exhausted by incessant vomiting, while the thoracic physical signs indicated only circumscribed and slightly advanced lesions.

Is this vomiting a rare fact? No, we have the experience of it in numerous examples in our wards. In his learned memoir, Bourdon admits that half of phthisical patients vomit. M. Varda, in a recent thesis, finds this number too high; it may be estimated at one-third, according to this author.

[Here follows a consideration of vomiting in itself as a reflex action in which the stomach itself has very little part, the act being effected chiefly by the action of the abdominal muscles, the respiratory nerves being those specially concerned in exciting this action, and the reflex center being situated in the medulla oblongata. The point of irritation is variable. It may be the mucous membrane of the pharynx, supplied by the glosso-pharyngeal nerve, which has justly been called the nerve of nausea. It may be the mucous membrane of the stomach,

supplied by the expansions of the pneumo-gastric nerve. Every acute pain, especially pain in the viscera, may provoke vomiting, or peripheric pain resulting from a wound may be the point of departure and determine vomiting. Finally, it may proceed from a visual impression or a simple recollection.]

There is here a physiological peculiarity important to note. Among the physiological acts which accompany cough, we have the closure of the glottis, which follows the contraction of all the inspiratory muscles. The dilated thorax remains distended by the air it encloses, and, so fixed, furnishes a more solid support for muscular power. In vomiting the glottis is open. The muscular contraction which results in an effort at vomiting, is produced after a deep expiration. The phenomenon of a cough is preceded by a full inspiration; in vomiting, on the contrary, there are produced strong expirations, which facilitate the dilatation of the esophagus in width at the same time with shortening. Finally, apnea precedes cough and sometimes succeeds in aborting it; on the contrary, one who is going to vomit, accelerates his respiration. There is then a sort of antagonism between cough and vomiting. And, moreover, there are functional relations which associate the two acts and unite them in certain cases.

Cough proceeds from a pharyngeal, laryngeal or bronchial sensation; nausea proceeds from a sensation sometimes pharyngeal, but chiefly stomachal. The two reflex centers of cough and vomiting are near each other in the medulla. The two acts, without doubt, may occur and be excited separately; we have, in fact, narcotics which paralyze vomiting while leaving respiration intact. But often these two centers are brought into play at once; the stimulation proceeds from one to the other, as it were; and it is so that vomiting brings on cough, and cough brings on vomiting.

Let us note here some of the peripheric and central conditions capable of producing vomiting.

The phthisical patient may have more or less tenacious, irritating and nauseous mucosity from the pharynx. This is a pharyngeal cause of vomiting. There is also a gastric reason which relates to the state of dyspepsia in which most of our patients live and die. Another peripheric condition of vomiting has been well studied by Bauty; it consists in the irritation

caused by the compression of the filaments of the pneumogastric nerve by the bronchial ganglia. Finally, tuberculous products of the pia mater, plastic meningeal exudations in the vicinity of the medulla may provoke vomiting by direct stimulation of the center of vomiting.

We have then to describe three sorts of vomiting in the phthisical:

1st. Mechanical vomiting, resulting from the excitement of the respiratory nerves, and in which often a certain degree of pharyngeal or gastric irritation assists.

2d. A gastric vomiting, properly so-called.

3d. A central or bulbar vomiting.

(a.) Mechanical vomiting of the phthisical, which may be called more correctly, *direct vomiting*, is that of the commencement of the disease. It suggests the vomiting of whooping cough or that of spasmodic cough, but it differs from it in this, that it is not the intensity of the effort which appears to determine it. It ejects matter which is in great part alimentary. Gastric repletion provokes it. When the stomach is distended by the ingested food, the shocks of cough taking place, determine the rejection of the material which it contains. It is especially after the evening meal that this vomiting occurs, perhaps because the stomach is wearied at the close of the day and the peptic secretions are then less efficacious.

The first indication in this case is to calm the cough, which is very simple to say, but less so to accomplish. But since there are still other elements than this excitation in play, it is necessary to act upon them, and, in particular, upon the sensibility and secretions of the pharynx. Cleansing gargles detach the mucosity from the velum and fauces; alkaline gargles dissolve the products of secretion and free the mucous membrane. When there are produced irritation, redness, or even, as is not rare, some superficial ulceration in the vicinity of the velum or upon the palate, it is necessary to employ not only emollient and alkaline washes, but still more active agents, such as the decoction of poppy heads, with the addition of mel rosæ, borax, bicarbonate of soda. When the irritation is deeper, and the ulcerous lesions more marked, all the astringent modifiers are indicated: tannin, alum, decoction of walnut leaves, of oak-bark, of Peruvian bark. If these means are not sufficient, it is

necessary to resort to mild caustics: tincture of iodine, nitrate of silver, etc. But what we employ most frequently are the narcotics, fumigations with belladonna, with datura rather than nicotine: then the anesthetics and antispasmodics. M. Woillez recommends to touch the pharynx with a bromuretted solution—(1-6).

(*b.*) We come now to *gastric vomiting.* Nothing is more common than the gastric troubles of the phthisical. According to Andral, these appear in three-fifths of the patients; according to Louis, in four-fifths. They are, of a truth, very frequent. These vomitings come on at a quite advanced stage of the disease; it is the vomiting of the middle period. The matters vomited are no more purely alimentary. They are the aliment more or less altered, more or less chymous and transformed by digestion. There are also mucus and bile which enter into the composition. It is on a functional trouble of the mucous membrane that the cause of this vomiting depends.

There are gastric vomitings: 1st, from apepsia; 2d, from hyperemia; 3d, from convulsive gastralgia; 4th, from gastric irritation.

1st. The vomitings from apepsia, from the diminution of the stomachal secretions, are produced at all periods of phthisis; they are found most frequently in the beginning of tuberculosis. It is the vomiting of the "*embarras gastrique*," and nothing is more common than that condition at the commencement of phthisis. There is in the "*embarras gastrique*" diminution of peptics ecretions and augmentation of the epithelial secretions; this is what we see produced in all catarrhal affections. It will be necessary to act by the eupeptic bitters and tonics. It is in this case that we can say with reason: *Vomitus a vomitu curatur.* An emetic will be specially indicated when there is a marked saburral state of the primae viæ. In case of the omission of the emetic, which it is often well to spare to the phthisical patient, you can employ the topical calming agents: chloral, chloroform, ether, this last being much more efficacious, since it is peptic at the same time as calming, as shown by the experiments of Claude Bernard. Pepsine and diastaste render excellent service in these cases.

2d. The vomiting from hyperemia is observed, especially at the end, in cachectics. The means most appropriate to combat it

will be the absorbents, especially magnesia, then charcoal. The astringent powders will be still more efficacious to absorb the secreted products and modify the secreting service; such are ratanhy, etc. The powder of opium renders most valuable service in these conditions.

3d. The vomiting resulting from a sort of convulsive gastralgia of the stomach, calls for the administration of narcotics. Opium is in the first rank; the anesthetics, chloral and ether, the different antispasmodics, valerian in particular, ether and chloroform can be made use of. Finally, Seltzer water or the *potion de Riviere*, thanks to the carbonic acid which they contain and which are set free, will be very efficacious. Pulverization of ether upon the epigastric region and upon the back have been employed with advantage.

4th. Finally, when we have to treat a special irritation of the stomach, whether a deposit of tubercular granulations, or a simple gastric irritation, it is necessary to act through the regimen, to set the meals farther apart, to prescribe the use of milk diet, to employ alkaline agents, iodide of potassium in small doses. It is in these conditions that the different plasters act. Revulsion can also be employed with advantage: tincture of iodine, vesicatories, etc. Tincture of iodine can also be given by drops internally as a modifier.

(*c.*) We come, in conclusion, to *central vomiting*, which will not detain us long.

Central vomiting may occur at the commencement of tuberculosis. but it is very rare then. It is ordinarily in an advanced period that it occurs; it is symptomatic of encephalic irritation and more specially of irritation of the medulla, by meningeal exudations, by neo-plastic products. As to the vomited matters, they are chiefly mucus and bile. The therapeutic agents here at your disposal are quite numerous: chloral should be placed in the front rank, as it can even neutralize the action of apomorphia. Chloroform, exercising a double action, calming upon the brain and slightly stimulating upon the stomach, will be doubly useful. Opium and morphine act in the same direction, as also the bromide of potassium, which is given likewise in doses of one to two grammes, (15 to 30 grains). Electricity has been employed in different ways. Finally, inhalations of oxygen have been recommended, which I have not tried. Nitrite of amyl,

recently brought into use in the form of an inhalation, in the dose of a few drops, may, perhaps, act efficiently in this direction, since it has the effect of combatting troubles which result from anemia of the centers.

ON THE ABSORPTION AND ELIMINATION OF QUININE.

By Prof. Lepidi-Chioti.

From a series of experiments undertaken upon this point, the author concludes as follows:

1st. Quinine is certainly not eliminated by the saliva.

2d. It is not eliminated by the sweat.

3d. It is not absorbed after friction upon the skin.

4th. It appears at the end of thirteen to fifteen minutes in the urine, when it has been administered by hypodermic injection.

5th. It appears after fifteen to seventeen minutes, when it has been administered by the mouth and the primæ viæ are in good condition.

6. It is perceptible at the end of twenty to twenty-five minutes, when it has been administered by means of the enteroclysm and the patient has retained this for some time.

7th. It is found at the end of thirty to forty minutes when it has been injected by the aid of the ordinary clysopompe (Davidson's syringe) and has been retained some time.—*Il Morgagni.—La Presse Med., Belge*, Jan. 30, 1880.

COINCIDENCE OF BLUE SPOTS WITH THE PRESENCE OF PEDICULI PUBIS.

M. Duguet, having noted that those blue spots, which authors have considered to be a feature of typhoid fever, of synochal fever, of bilious states, etc., are always met with in patients affected with pediculi pubis, thinks that they are due to the action of a poison which the animal introduces into the skin. He took, then, a number of these parasites, crushed them in a little water and so obtained a paste, of which he introduced a small quantity under the skin, by the aid of a lancet. At the end of twenty-four hours, there were as many blue spots as he had made punctures: these spots lasted eight or ten days.—*L'Union Méd.*, Oct., 1880.

REPORTS ON PROGRESS.

DISEASES OF THE GENITO-URINARY ORGANS.

Bladder-Drainage in Cystitis and After Operation for Fistula—Chiene recently communicated to the Medico-Chirurgical Society, of Edinburgh, the results of his efforts to establish and maintain drainage of the bladder *per urethram* after operation for fistula of the urethra, and in other conditions where it was desirable to prevent wetting the urethral walls with urine. His method is as follows: A gum-elastic catheter is introduced and fixed to the penis with sticking-plaster, care being taken to have the eye of the instrument just within the neck of the bladder. To this catheter an india-rubber tube is fixed, of sufficient length to reach easily over the edge of the bed and to the floor. It then passes into a bottle which, as well as the tube, is filled with carbolized water. Care is taken that no air can get in at any of the joints. It is well also to introduce, at some convenient point in the tube, a piece of glass tubing, for the purpose of observing the direction of the flow. In order to keep the india-rubber tube steady in the bottle, a piece of glass tubing is attached to its extremity; this prevents folding at this point. In this way a syphon action is established, the suction power of which will be in proportion to the length of the tube, and which will draw the urine into the eye of the catheter as it passes, drop by drop, from the orifices of the ureters into the bladder, and a constant slow current of water will pass along the tube to the bottle. The bottle is allowed to overflow into a basin which can be emptied without disturbing the apparatus. The bladder is thus kept constantly empty, with the exception of two tiny streams that pass from the mouths of the ureters to the eye of the catheter. Care must be taken not to have too great a fall, as a piece of the mucous membrane may be drawn into the eye of the catheter, causing distress and plugging it up.

This apparatus is recommended by the author for use in cases where it is desirable to *keep the urethra dry* and *to give the*

bladder rest. He has had good results with it, in cases of operation for urethral fistula where there was considerable loss of substance. It has been used with advantage in a case of recto-urethral fistula, in four cases of chronic, persistent perineal fistula, that had resisted the usual methods of treatment. In all a permanent cure was effected, the instrument being kept in for a period of time varying from a week to a fortnight, it being occasionally removed for the purpose of readjusting it. No bad results whatever were found to follow its employment. It is also of value in hastening healing and keeping the wound dry, in cases of external division of stricture.

Particular attention is directed to this method of bladder-drainage in cases of chronic cystitis, and the author thinks it will take a most prominent place in the treatment of this troublesome and common affection. [In this country, cystotomy is frequently performed to secure this result, and has the sanction of high authority.—Rep.] The frequency of micturition, it is claimed, is at once relieved, and the bladder given, what it most needs in order to heal, rest. In cases where there is a great deal of mucus, plugging of the catheter is prevented by using an instrument with a double eye. The patient at once feels the discomfort incident to the stoppage of the flow, and by elevating the bottle can remove the obstruction by causing a backward flow of the urine. The quantity of mucus secreted was, in some cases, quickly and materially diminished.

The following points, raised by the discussion that followed the reading of the paper, are noted:

1st. In catarrh of the female bladder, the instrument had been tried but had failed, on account, it was thought, of air passing into the catheter, by reason of the short urethra.

2d. The red rubber catheter was not used, because of the difficulty of fastening it in the bladder.

3d. It had been used in one case of enlarged prostate, but did not work efficiently. There are, doubtless, cases where it would be efficient in this as well as in malignant disease of the prostate.

4th. Phosphatic deposit had never given trouble, the reason, probably, being that the end of the catheter did not lie bathed in urine, but was practically dry, the syphon action drawing the urine rapidly away.

5th. It would be of service in cases of rupture of the membranous urethra, in preventing extravasation of urine.

6th. The habitual night and morning rinsing of the bottle is sufficient to prevent the accumulation of mucus and the plugging of the catheter.

7th. In tying in the flexible catheter, a strip of adhesive plaster is fixed firmly to the catheter with silk. This strip passes down either side of the penis. A piece of boracic lint is wound round the catheter, at the meatus urinarius, under the strip of plaster. Another strip of plaster is wound round the penis, over the strip passing down its sides. After it has been round twice the strip passing along the sides is turned forward, and two more turns are taken; then backward again, and two more turns are applied. In this way the catheter is practically incorporated with the penis.—*Edinburgh Med. Jour.,* Dec., 1880.

Irrigation of the Bladder.—Fischer, instead of using the ordinary double catheter for the purpose of irrigating the bladder, employs one that is somewhat bulbous and perforated with holes at its extremity, and which allows the water to escape through the opening near the curve of the instrument. This arrangment permits the washing out of the entire organ, which the double catheter, with eyes for entrance and exit of the fluid opposite each other, does not do. Instead of a bulb he uses an irrigator for the purpose of securing a steady stream and obviating the shock made by alternately filling and emptying the viscus. He washes out the organ in chronic catarrh for the purpose of getting rid of the mucus. In atony of the bladder he advocates the injection of cold water, the first part of the fluid introduced being warm, but the stream is gradually cooled down until it is quite cold. He thinks the cold acts as a stimulus to the organ, and after a few injections it regains its power to contract. Where the inflammation tends to be destructive, he washes out the organ thoroughly before using medicated solutions, and thinks that there may be cases where continual irrigation with diluted remedies may be of service.—*Berl. Klin. Woch.*, Nov. 29th, 1880.

Cystotomy for Removal of Villous Growth.—Mr. Davies-Colley, at a meeting of the Clinical Society of London, read notes of a case of a shipwright, aged 32, who had suffered from hema-

turia for eight years, and who was reduced to a state of extreme anemia therefrom. The diagnosis of villous growth of the bladder was arrived at, though no villous masses were ever found in the urine. It was evident that the blood did not come from the kidneys. The patient was etherized, and the bladder opened by the usual incision for lateral lithotomy. At first nothing could be felt by the finger in the bladder, but finally a slight projection was made out on the left side of the fundus, with a cord-like process running from it. Shortly, the free end of this process, with a soft, pinkish tuft of villi was seen at the deeper part of the incision. It was seized with the forceps, drawn out and the pedicle cut with a scissors. The slight hemorrhage was checked by the injection of iced-water. No other growth in the bladder could be made out. In two weeks the perineal wound closed, and the patient made a good recovery. Two months after the operation there had been no return of the hemorrhage, the irritability of the bladder had ceased, and the patient had recovered perfect health.

The tumor grew from the posterior wall of the bladder, at about three inches from its neck, and about one inch to the left of the median line, and consisted of a fibrous stalk two inches long by one-sixth of an inch thick. From the end of the stalk filaments, consisting of capillary loops covered with cylindrical epithelium in several layers, branched.

It was developed, in the discussion that followed, that this is the first case of successful removal of villous growth by the knife. Civiale removed one with the lithotrite. Prof. Humphrey and Prof. Billroth had each removed a fibrous polypoid growth from the bladder. Mr. Davies-Colley said that had the growth been sessile instead of pedunculated, great difficulty would doubtless have been encountered in its removal; but by scraping and tearing much might have been removed and the hemorrhage arrested for a time. The diagnosis was difficult, and he had lately employed the washing bottle used in litholapaxy for the purpose of getting away some of the villous growth very effectually.—*London Lancet*, Dec. 18th, 1880.

Accident to a Lithotrite while Crushing.—Mr. Coulson, reported to the London Medical Society an accident of an unrecorded kind to a lithotrite. A Bigelow's lithotrite was being used to crush a stone that offered much resistance, and that

finally fractured with a loud crack. The stone was two inches in diameter. Three or four fragments were then successfully dealt with, when it was found that the screw and pins by which the lithotrite was fastened to the shaft had given way, and the two portions of the instrument had become separated. No means of connecting the separated parts could be devised. By percussion on the handle the blades were freed as much as possible from fragments, when the instrument was withdrawn, some injury being done to the vesical neck and urethra in its removal. Crushing was then completed with the fenestrated lithotrite, and debris to the amount of 500 grains removed with the tube and aspirator. No bad symptoms followed, which was attributed to the removal of all the fragments. The time occupied was two hours and ten minutes, which included twenty minutes delay on account of the accident. — *London Lancet,* Nov. 27th, 1880.

Divulsion of Stricture.—Mr. Barnard Holt, in a communication addressed to the *London Lancet,* affirms that, the large number of operations that have been, and continue to be, performed by surgeons for the immediate relief of stricture by divulsion, with so few bad results, speaks volumes for his method. He is as strongly in favor of this method of treatment as ever, and has lately operated on an unpromising case with the most perfect success; at the same time he would warn those who are deficient in the manipulative skill required for the passage of the dilator to refrain from the use of an instrument with which they are practically unacquainted. The fatal cases alluded to by Mr. Wood at the Cambridge meeting of the British Medical Association were two in number, and occurred in the practice of his (Wood's) colleagues at King's College Hospital. In one Mr. Wood could not recollect the particulars, and in the other he remembers that the patient was the subject of albuminous urine, and, of course, was hardly a proper case for operation of the kind. Mr. Holt has not replied, and will never do so, to Mr. Teevan's criticism of his operation, simply for the reason that, as Mr. Teevan has recently informed him, his experience is confined to four cases, which does not render him fit to form any opinion as to the value of the operation or its results.—*London Lancet*, American Reprint, Nov., 1880.

John P. Bryson.

DERMATOLOGY.

Pityriasis Maculata et Circinata—Duhring in a careful and able paper has redirected the attention of the profession to a peculiar disease, which had formerly been described by Bazin, Hardy, and later Horand, under the caption above. It is an inflammatory disease, of a mild type, occupying chiefly the trunk, and more especially the sub-clavicular, lateral thoracic, and scapular regions, characterized by discrete or confluent macular or slightly raised, maculo-papular lesions, usually the former, varying in size from a pin's head to a silver half dollar. Their usual size is that of a split pea or silver half dime. They are rounded, circuiar, or ovalish, sharply circumscribed, superficial, and may be either on a level with the skin, or elevated slightly, or slightly depressed. Their border often presents the appearance of a ring. In color they are generally rosy or pale red, with later a more or less yellowish or tawny tint, sometimes the red is deeper, and the coloring mottled. There is scanty furfuraceons desquamation; this is usually more pronounced at the borders of the lesions, which incline to heal in the centre, and to spread at the periphery. The skin is but little thickened. The subjective symptoms are variable—sometimes there is decided itching, and again the patient is hardly aware of the existence of the eruption. The affection usually lasts from one to three months, when spontaneous involution sets in, recovery taking place, with increased desquamation and pigmentation, within a fortnight or a month. The onset of the disease may be sudden, or gradual. The lesions are in most cases numerous and closely aggregated, in which case, as they enlarge, they tend to coalesce, forming variously sized and shaped, often large, macular or circinate patches. Horand's cases occurred only in children, while Duhring's patients were chiefly adults, of both sexes, and in average good health. There is no parasite to be found in the scales, and the disease is not contagious. It may be confounded with tinea circinata, tinea versicoler, seborrhœa corporis, lichen ruber, psoriasis and syphilis.—*Am. Jour. Med. Sci.*, Oct· 1880.

Herpes Progenitalis.—Greenough, very justly regards this form of herpes as deserving of particular study from a diagnostic point, especially since it is so frequently confounded with syphilis either through ignorance or design. He says that its most interesting and characteristic features are the tendency to relapse, the very great frequency with which the affection has been preceded by the act of coitus, the fact that it is rarely or ever found in patients who have been perfectly free from all venereal taint, and that it is confined to the periods of youth and early manhood. *Archives Dermatol, Jan.* 1881.

Kerion Celsi.—Atkinson, holds that tivea Kerion is an affection of the scalp, comparable to parasitic sycosis, depending for its origin upon tricophyton tonsurans, and rarely observed. He says that the ordinary descriptions fail to give a correct picture of the whole series of changes presented by this disease. At one end of the series may be arranged those conditions resulting from deep-seated follicular inflammation, and characterized in its mildest form by lumpy, livid, boggy, semi-fluctuating elevations of the affected surface, tender to pressure, and dotted here and there with pustules developed around the hair shafts. Incisions into these elevations release only bloody scrum or blood.

In the advanced form, to which the term Kerion has been usually applied, the elevations are perforated by openings corresponding to the orifices of the hair follicles, through which the viscid, transparent or semi-purulent fluid exudes in considerable quantity, giving the patch the peculiar honey-comb appearance that has given it its name. In probably a later stage, the fluid not finding an exit, in consequence of an adhesive and obstructive inflammation of the follicles, collects in pockets, and may require to be released by the lancet or may undergo reabsorption. Under these circumstances the few hairs that remain in the patch are nearly always broken and split, and show abundent fungus, as likewise do the root sheaths that frequently remain clinging to the extracted hair. At the extreme end of the series are found the physical characters of the honey-comb condition, with, superadded, the evidence of severe and acute inflammation and the free production of pus. The hairs that have not been swept away by

the discharge lie bathed in pus, but often unaltered in texture, fungus is no where visible; it has been destroyed by the inflammatory action. Between the purulent and non-purulent phases of this one pathological process there exists only the differences of degree.—*Archives Dermatol, Jan.* 1881.

Bacterium Fetidum—Thin states that the excessive sweating of the feet and hands is not rare, but that the terribly offensive smell which sometimes accompanies this condition in the feet is due to the organisms which are found in the stockings and inner surfaces of the boots. The fetid odor of the stockings was reproduced in the cultivation glasses, but gradually diminished in strength with successive generations. In the treatment of this malady he directs that the stockings be changed twice daily, and the stocking-feet be placed for some hours in a jar holding a solution of boracic acid. They are then dried and fit to be worn again if desired. The boracic acid effectually destroys the smell. As the leather of the bottom of the boot is equally offensive, a half dozen cork soles are also required. A pair must be worn only one day unchanged; at night they are placed in the boracic jar, and are put aside next day to dry. (A number of methods of treatment have been recently brought forward in this connection. Willcox straps the feet with adhesive plaster, which is to be removed in three or four days; at the end of a week the cure is complete.—[*Brit. Med. Jour*, Oct. 23, 1880.] Ainsworth relies on bathing the feet every morning, together with change of stockings, and the free application of a powder composed of pulv. alum exsiccat., ℥iij; acid salicylici, ʒss-iij.—]*Med. Record*, Oct. 2, 1880.] Another writer has gained satisfactory results from bathing the feet in very hot water, morning and evening. We have found the plan originally suggested by Hebra, strapping with diachylon, to meet every requirement.)—*Brit. Med. Jour.*. Sept. 18, 1880.

W. A. Hardaway.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, January 30, 1881.—Dr. Boisliniere, President, in the Chair.

UTERINE POLYPUS.

The president presenting a uterine fibroid the size of an orange said: The patient was a woman about 47 years of age, who had only one child, born seventeen years ago. Menstruation had been normal, until about seven years ago; it became excessive, lasting for ten days or two weeks, with very brief intervals of rest; for six months the flow had been almost continuous. A few days ago she came under the care of Dr. Gregory, who kindly invited me to see the case. The tumor was pedunculated, protruding from the dilated os; the sound passed beyond the tumor to a depth of 3 inches. The case was a favorable one for the use of my tumor forceps, which I applied, and by steady traction, drew it from the uterus and vagina, the chain of the ecraseur was applied and the pedicle severed.

The utility of the forceps was very satisfactorily demonstrated in seizing firmly and compressing the tumor, and at the same time facilitating the proper application of the ecraseur, as the chain slips easily over the firm surfaces offered by the blades.

Dr. Gehrung—I witnessed the operation, the forceps seemed to simplify the operation very materially, the tumor was in size much larger than the vulva, and was brought through with apparent ease.

I should like to ask, what becomes of the capsule of the tumor at this stage of its growth? Has it a capsule? Its existence is questioned by some who consider it merely a condensation and continuation of the uterine tissues, or the outer layers of the tumor tissue.

Dr. G. A. Moses—I reported a case some time ago, of a large

uterine polypus, which, upon being seized, slipped easily away, leaving a cup-shaped portion of capsule about an inch and a half deep, attached to the pedicle, which was afterwards excised by the ecraseur, here the tumor covering seemed to have gradually disappeared up to a certain point, so that the connection with the base was so slight that the first attempt at extraction was sufficient to detach the growth from its embedding—the encapsular coat does not seem to form a part of the original growth, but to be formed by pressure of adjacent tissues and distension of the uterine mucous membrane.

Dr. Engelmann—In the course of time the capsule becomes distended, and there is probably very little or nothing of it left.

Dr. Ford—In a sub-mucous fibroid, what is called the capsule is, as far as I understand it, nothing but flattened layers of tissue, flattened by pressure on the parenchymatous tissue of the uterus. It has no true existence on the uterine aspect.

It seems to me that the capsule is a result of simple growth of the tumor pushing aside the connective tissue, having no muscular coating. The tumor is thus circumscribed by what we call the capsule.

HEMORRHAGE DURING PREGNANCY.

Dr. G. A. Moses—I will report a case of what to me is a peculiar hemorrhage. A lady pregnant with the second child, perfectly healthy in all respects, about seven months pregnant, possibly near the menstrual epoch, without having made any exertion, in fact, having spent the day rather quietly with a visitor, while bidding the visitor farewell, had, without pain, a sudden, enormous gush of blood from the vagina, sufficient to make a pool upon the floor of two or three feet in circumference. Her friend, who had frequently had abortions and miscarriages, had presence of mind enough to make her lie down on a bed, and sent for me. Upon arrival I found the flow still continuing, quite excessive, but not as large as it had been at the first moment. I found the cervix soft and rather boggy, to the touch, but not patulous. After keeping quiet a little while, and before I had time to take any measures at all to check it, I found the hemorrhage diminishing, so I did nothing but enforce quiet, and soon the hemorrhage ceased entirely, excepting when she would make a movement—the slightest

movement, as turning in bed, would bring a sudden gush from the vagina. Next day she had no other hemorrhage until she used a urinal. She could not use the bed-pan, and she got out of bed to use the vessel. There was a large gush of blood,—apparently arterial. However, I looked with a great deal of interest for the next few weeks, and kept her in bed ten days, but she had no more hemorrhage. She was confined naturally, having a perfectly healthy labor at the termination of the period, exactly two months to a day from the time this hemorrhage took place, the hemorrhage occurring on the tenth of November, and she was confined on the tenth of January. The child weighed eleven pounds, and is perfectly healthy. The placenta was large and absolutely normal. It was attached in a normal position. There was no sign of degeneration of any portion, nor of separation. It was examined very carefully. What was the cause of that hemorrhage? She had no edema, no headache; she had no appearance, or symptom of any sort of disease of any character. Her menstruation had always been perfectly normal, she had never had any menstrual trouble, except dysmenorrhea for a short time, in early life.

Dr. S. G. Moses—I thought this hemorrhage must have come from a placenta prævia, but the placenta was perfectly natural and healthy. I think from the condition of the vagina that the hemorrhage must have come from the uterine neck, or from the vagina itself. She had no ill effects from this hemorrhage. It looked to me as if it might have occurred from a varicose condition of the vagina, which, however, was not detected—there was no erosion of the cervix.

Dr. Papin—We sometimes see hemorrhages from the neck about the menstrual period, that are generally attributed to natural congestion; this may be an exaggerated case of the kind. I remember two cases of that kind, where a loss of blood occurred, in one case, at the end of the fifth month, and in the other, about the seventh month, but on making a uterine examination, I found a congestion around the neck of the womb, and I have no doubt that in these cases the blood issued from lesion in that part, in the mucous membrane.

MENSTRUATION DURING PREGNANCY.

Dr. Boisliniere—I know a woman who never menstruates

except during pregnancy—if you would call that menstruation. More properly, perhaps, it is accidental hemorrhage. It is a flow of some kind. I don't think it is a periodical flow of blood. Has any body a case in point?

Dr. Papin—Yes, sir, I had a case where the ordinary menstrual discharge took place at the end of the fifth month, or before that time. The membrane ruptured after the fifth month.

Dr. Maughs—In the case reported by Dr. Moses, if I understand the gentleman, it was supposed to come from the uterus, but I am inclined to think it more probable that it was due to the rupture of some of the pelvic blood vessels in the vagina. It is quite a common occurrence, one which happens frequently. One of the large veins of the vagina gives way and an abundant hemorrhage occurs. It is probable that she did'nt have any flow of blood from the uterus at all.

It is claimed by some authorities that there are women who menstruate during pregnancy, and like Dr. Boisliniere's case they say these women never menstruate except during pregnancy. Now, really, I do not believe it because other men say so. When I see it myself I will believe it. It is a physiological impossibility for any woman to menstruate after the third month of pregnancy. So that in these cases, of which we hear, where the woman never menstruated except during pregnancy, the truth is they simply have never had hemorrhages except when pregnant, when from some condition of vascularity or ulceration of the cervix, there breaks forth an occasional hemorrhage, not menstrual at all. The only possibility for a woman to menstruate during pregnancy would be where she had a uterus bicornis, but not if the uterus is normal. I have seen a few cases where the woman had a slight discharge. This went on for two months. That is not a very uncommon thing. We can see, very readily, the reason for this, because the lower portion of the mucous membrane of the uterine wall is not all in contact; but, after the third or fourth months I don't believe it a physiological possibility for a woman to menstruate; and I think that any man who has had experience of the kind has invariably decided in those cases where a woman believed herself pregnant and still menstruated regularly, after the third or fourth month of her supposed pregnancy, that there was no pregnancy.

Dr. Papin—Mr. President, notwithstanding what Dr. Maughs has said, I am satisfied that I have seen cases of women who lost blood at the monthly period during pregnancy, one case at the fifth month and another at the seventh month. I am satisfied I was not mistaken. In the second case, I examined her, and saw the blood actually exuding from the mucous membrane. I never believed it myself before that time. I have now under treatment what I consider a very remarkable case: A woman who has never menstruated. She is about 22 or 23 years old, pretty well developed, and says that from the time she was 14 years old her breasts grew, her waist became thinner and her hips became broader, and every month, from that time to this period, she has apparent pain of dysmenorrhea; and yet at no period whatever has she ever lost a single drop of blood. She came to me on account of this unnatural condition, in the hope that I could establish the menses. I can well understand, sir, why one woman loses more blood than another, there is probably more congestion, a little more rupture of the vessels along the internal portion of the womb, hence some women bleed a longer period than others. One woman, whose menstrual period lasts eight days, would lose about eight ounces of blood during that time, and another twenty-two ounces, and yet both are perfectly healthy. And it may be there is excessive congestion at the time of ovulation and the woman loses blood during pregnancy. We know that once a month a woman experiences a fullness about the hips, a bearing down tendency—there is no menstruation, there is no ovulation but there is some additional congestion at that period when she has been accustomed to lose blood, and she may lose blood at that period. For the first two or three months she may, during this period, actually menstruate. Dr. Maughs explains to us that the flow of blood comes from the neck and mucous membrane below the internal os. This young lady came to me and wished to know if it were possible for her to marry and bear children, and I advised her to marry. It is possible that in the case of which Dr. Boisliniere speaks, the woman who never menstruates except during pregnancy, there may be some slight erosion of the neck.

Dr. Prewitt—Does it come regularly every month at the time the menstruation ought to come?

Dr. Papin—It does not matter when it comes, so long as it

does come. I don't know why it should be called menstruation in one case and not in the other.

Dr. Prewitt—I do not understand, nor do I mean by menstruation during pregnancy a mere bleeding from the os—this is not true menstruation.

Dr. Papin—Of course not because menstruation, properly so-called, is the result of ovulation.

Dr. Engelmann—I have been greatly interested in the discussion. If ovulation is the cause of menstruation, why is it that women have had menstrual discharges, periodic discharges of blood, after the operation of double ovariotomy in which both ovaries have been removed. That is, there is a loss of blood at regular periods, still, and it may be called menstruation.

Dr. Boisliniere—You are aware that the position has been assumed by some, that it takes a very small fragment of the ovarian tissue to develop ovules, and again it is supposed that there are three hundred and fifty thousand ovules in each ovary. Now, if the ovary is removed, it will often be so done, that some small particle is left, and if even a very minute part is left, it may secrete ovules, and cause menstruation; and then an explanation may be made in another way, we often find persons with more than two ovaries, sometimes we find three or four—some rudimentary of course.

Dr. Papin—Can a female menstruate without ovaries?

Dr. Boisliniere—I do not admit that she can menstruate without ovulation, although she may ovulate without menstruation. That is very common. A woman may bear children, and never menstruate.

Dr. Engelmann—I had a case that Dr. Prewitt may recall, in which there was an ovarian tumor on the right side with a long slender pedicle. That was cut off with the long pedicle, we then removed the second ovary, which had a cyst in it about the size of an orange. That ovary was removed as completely as I could possibly remove it; I think it was completely taken away. The patient menstruates almost at the regular time, and is in excellent health, better than she has been for a great many years. Her menstruation slowly decreased, it became a little irregular, then it became more scanty for about five months, and since then it has come on with perfect regularity. She is married, and is the parent of a number of healthy children. I have never seen a third ovary.

With reference to Battey's operation, I removed one ovary from a patient, and she ceased to menstruate. I made an examination, but could not find the other ovary, although I searched for it by bimanual examination with my hand in the abdominal cavity. For six months after the operation she menstruated, but eventually it almost ceased. So that in the one case, that of the patient where both ovaries were removed, menstruation continued almost regularly, while the patient in whom only one ovary was removed, has almost ceased to menstruate. In another patient, on whom Dr. Hodgen operated during my sickness, there is vicarious menstruation or menstruation from the pedicle, only one ovary was removed. Since its removal she has menstruated, but with some little difficulty. She seems to have a great deal of engorgement before the main flow, which is from the pedicle, only a small quantity coming from the vagina. After every menstrual period, a little opening can be detected in the middle of the cicatrix, not large enough to run a bristle in, not larger than a follicle or pore, but from that, she says, at the last period, as much as a tablespoonful of blood exuded. I have never seen it at the time of the menstrual flow. The patient looks in good health, full and hearty, is a working woman, doing the house and kitchen work of a small family, and has borne children some years ago. In this case we see an example of vicarious menstruation, a loss of blood through this pedicle. It is probably a Fallopian tube.

Dr. Prewitt—I don't think it ought to be called vicarious menstruation because there happens to be a flow of blood from the pedicle. I had such a case a few years ago, the pedicle was fastened in the external incision, and during the menstrual period the blood oozed, for a time, through the pedicle. A portion of the blood escaped through the opening from the Fallopian tube, but I do not think it should be called vicarious menstruation.

Dr. Maughs—The blood flows from the Fallopian tubes undoubtedly, but I wish to speak on the subject of menstruation during pregnancy. Menstruation is ovulation, and ovulation is menstruation. A woman who ovulates may conceive very readily without ever having had a colored discharge in her life. At the time of menstruation the Graafian follicle bursts, the uterus enlarges, its mucous membrane thickens, and begins to undergo

fatty degeneration, and the blood vessels rupture as a consequence. I cannot conceive how this periodic hemorrhage, which commences in the ovary and terminates with the degeneration, and removal of a portion of the mucous membrane of the uterus, has any connection with a merely accidental hemorrhage.

Dr. Prewitt—Do you concede that there is such a thing as vicarious menstruation?

Dr. Maughs—Well, no, sir, I do not. I concede that there is such a thing as vicarious hemorrhage. I could not concede that menstruation occurred from the mucous membrane of the nose. It would be hemorrhage. But I hold that ovulation is necessary to menstruation. With regard to the case of a woman menstruating with both ovaries removed, I would say that there are few cases of ovariotomy in which every particle of ovarian tissue is removed, and so long as we have any ovarian stroma left, she may ovulate. She could not conceive, because the Fallopian tube is cut. She might menstruate, however; but conception is prevented, because the connection between the ovarian stroma and the uterine cavity is cut off.

Dr. G. A. Moses—Supernumerary ovaries are very rare, perhaps not more frequent than supernumerary testicles; but I think there are some well authenticated cases, and among them I regard Dr. Engelmann's as quite a strong one of real menstruation, that is, a periodic discharge from the mucous membrane of the uterus, occurring after the ovaries have been removed; and to say that when this takes place, there is some portion of stroma remaining—no matter how small it may be—seems to me to be a last resort to sustain the theory. I do not think we have any reason to doubt that these gentlemen removed the ovaries entirely. In the case to which Dr. Engelmann refers, I think he showed the ovaries to me, and, so far as can be judged, the organs were intact, and yet the menstruation became quite regular. It is not scientific, nor will it assist the evolution of the truth to endeavor to support a theory by such a supposition. With regard to vicarious menstruation, I have reported a case of monthly bloody discharges from an ulcer on the leg, which being cured, the uterine menstruation took place in a perfectly normal manner. We not very unfrequently witness these vicarious discharges. As regards the question of habit, it is another

question of discussion, how long can a habit of this sort be sustained? I doubt if it would not gradually disappear within a very short time. I am not disposed to think that a habit can be so impressed upon the organism as to produce, for any great length of time, such persistence of physiological functions.

Dr. Ford—This is a highly interesting and very extensive subject, much more so than merely practical considerations could indicate.

Before saying anything upon this topic, however, I will beg leave to remark, that it has always appeared to me that one of the most valid objections urged against Battey's operation is the final one, viz., that we can not be certain that the operation, if otherwise successful, will effectually induce the menopause, or prove ultimately beneficial. Undoubtedly it does prove effective in some cases, but in not a few incomplete menstrual efforts seem to continue, and occasionally, even a complete molimen, such for instance as in Dr. Engelmann's case, in which menstruation occurred after both ovaries had been removed, and in certain cases after extirpation of both ovaries in ovariotomy. So that it does seem that there is not the absolute certainty that we will produce or hasten the menopause which ought to exist in view of the great risk of the operation And now with regard to the direct dependence of menstruation upon ovarian activity, we should recollect that there is a broader view of this question to be taken than is commonly expressed. Nature is far more intricate, infinitely more wonderful than we know. Our systematic gynecology has scarcely been favored with a glance at her mysteries. There is a wide-spread, but to my mind quite superficial hypothesis that the uterine phenomena of menstruation are directly induced by ovarian excitement; so, also, that the entire act of ovulation is a mere habit, or secretory function of the organism. On the contrary, I must regard ovulation, not as an act of secretion, but as one of growth, in its modification as developmental reproduction. The human female, and that of all mammals, is smaller than the male, her growth physical and psychical is inferior in degree to that of her mate. Now this inferiority of size is abundantly significant. Their growth is arrested because the powers of life are destined to be devoted to the maintenance of a modification of mere growth, and to the excitation of a special function, the

function of reproduction. This great function of ovulation is not merely an accident or even a physiological phenomenon of female existence. It is far more, it is the continued life of the woman herself, continual evidence of the realization of the original plan of her organization. What we term ovulation consists of several successive and inter-dependent phenomena or stages. Ovulation and menstruation are accompanied by the periodical pullulation of the uterine mucous membrane. This periodical growth of the uterine mucosa is linked with the very life of the woman herself. The existence of the female implies such a periodical growth, which we do not find in the male. It is very interesting to observe this, because this periodical renewal of lost substance is the only instance known in either sex, in which tissue is truly, homologously, and completely renewed after total or partial destruction. In these we see the plain manifestation of that reserve of developmental power characteristically resident in the female. Menstruation is not, and can not be a mere local phenomenon. The whole system sympathizes with this function—sympathizes in a general activity of all the functions, even I believe in that of sanguefaction. This newly-made blood is finally lost in the out-flow from the uterine cavity, or it may be lost by any other vascular surface, as in vicarious menstruation. It is questionable of course whether the loss of blood as normally observed, occurs in consequence of tonic contraction of the uterus and an attendant fatty degeneration of the inner layers of its turgescent mucous membrane, or whether it is brought about towards the close of the period of turgescence by interference with the outflow of blood also due to tonic uterine contraction, in this case by a mechanism analogous to that by which venous hemorrhage is caused by obstructions of any kind, or whether, finally, the vessels are ruptured by the primary *vis a tergo* of acute determination of blood. Of late years it has been claimed that there is really no fatty degeneration in the case. I think it is interesting to look at this whole matter from a more elevated standpoint than usual. I do not think that physiology would teach us that the functions of the ovaries and of the uterus are necessarily dependent upon each other. Either may occur without the other, although the proper co-ordination habitually determines the observed sequence.

FORCEPS VS. PODALIC VERSION.

Dr. Yarnall—Mr. President, I arise to ask the society the privilege of making a few remarks on the subject of podalic version. It will be remembered that, incidentally the method of turning, and the dangers attending the operation, was spoken of when my paper on "Forceps vs. Turning in cases of contraction of the pelvis at the antero-posterior strait" was being discussed at the last and the meeting previous to the last of this society. Dr. Moses, Sr., and Dr. Maughs were kind enough to indorse and even compliment my paper as a whole, but when I stated in the after discussion that it mattered little which hand was introduced when we performed podalic version, and further, that the child could not be turned backward, as had been suggested by Dr. Moses, the gentlemen differed from me, Dr. Moses stating that children have not only been turned backwards, but, if I remember correctly, that records will show that the backs of children have been broken in the uterus, and that it is necessary to be very careful to avoid the catastrophe. Dr. Maughs endorsed this position, if I understood him, and further stated that it was necessary to use one or the other hand, according to the position of the child, especially if the patient was upon her side; that if on her back, though not so imperative, it was also highly proper to choose one or the other hand, according to the position of the child. Now, Mr. President, I have the highest respect for the opinions and experience of Dr. Moses; and for Dr. Maughs not only may I say the same, but more. For years I have followed his teaching, and none can appreciate more highly, not only his literary attainments, but his pre-eminent practical attainments. The views of both these gentlemen were evidently entertained by the members of this society near me, and I believe Mr. President nodded approval. Notwithstanding, I must still adhere to my views. It is with no captiousness or spirit of controversy that I will endeavor to defend the position, and not only defend it, but I will undertake to prove that I am correct. I should have spoken on this subject when the matter was under discussion, but I had not consulted authorities on the subject. I vaguely remembered that when I was a student I had heard or read somewhere that it is very necessary to avoid turning backwards, and instructions given as to which hand should be

used, etc. Often, when I have performed this operation, I have contemplated the usefulness of such teaching. But, as I have the highest respect for authority, especially if I agree with it, I determined to look this matter up. Authority is always valuable if it is experienced; and worthless if inexperienced. To illustrate my idea, I need only speak of the many dissensions and monographs that have appeared during the last year or two upon the use of the obstetrical forceps. The remarks or papers of the experienced accoucheur are always appreciated, and that of the inexperienced writer or theorist always criticized, either publicly or privately, because he can not hide his want of practical knowledge. Hence I have, in selecting authority, taken only admitted masters—Paul Dubois, Cazeaux, Hodge, Leishman and Playfair. Dubois admits the difficulty of learning the position in many cases; and, while he teaches, if a perfect diagnosis is made, which hand to use; he ends by saying it is a matter of indifference. And now remember he never alludes to the possibility of turning backwards. Hodge says: "The best rule is to choose, where the practitioner fronts his patient, that hand which in a state of semi-pronation has the palm corresponding to the front of the child. Many other rules have been proposed that need not be specified and much must be left to the convenience and judgment of the operator." Again, he says: "It often happens that only one limb of the child can be reached, which is then to be brought down in a state of adduction and not of abduction as then dislocation of the limb might result." I cannot find the slightest allusion to turning backwards in his work. Cazeaux gives virtually the same directions as Hodge, as to the hand to be introduced, but as evidence that he did not deem it a very important matter in cases in which the hand introduced is not in accordance with his rule, he adds: "We might use the hand first introduced so as to spare the patient the pain and repugnance which the introduction of the second one always occasions her." After giving complete directions as to the seizure of the feet, etc., he tells us that "the feet are drawn upon in such a way as to double up the fetus on its anterior plane," but he does not allude to the possibility of turning backwards. And now for the two great modern authorities—Leishman and Playfair. Leishman says: "The directions which are given as to the hand which

should be employed, are of little practical value. Indeed it is impossible in some cases, as in placenta previa, to recognize before it has been passed into the uterus, the conditions which are held to indicate the right hand or the left. Most people can act more efficiently with the right hand than with the left hand, and there is no possible direction within the pelvis in which the right hand may not be passed." Again, he says: "If the operator is left handed, he should use the left hand in preference to the right." Again, in speaking of cases where we find version impossible, he says: "Before finally abandoning the attempt to deliver by this method, we must be sure that we have pulled down the foot in the proper direction, so as to turn the child forward. An error here is not likely, as we would naturally pull the foot, when seized, directly toward the os; and if we have passed the hand along the abdominal surface, we can scarcely go wrong; but it is quite possible that by omitting this precaution and passing the hand over the dorsal surface to reach the foot, we may discover, in addition, that when it is reached and seized, turning is impracticable after all." And, gentlemen, that is the position. It is impracticable to turn backwards, If version is to be performed it must be forwards. So much for Leishman. Now for Playfair.

"The practice followed with regard to the hand to be used in turning, varies considerably. Some accoucheurs always employ the right hand, others the left, and some one or the other according to the position of the child. In favor of the right hand, it is said that most practitioners have more power with it, and are able to use it with greater gentleness and delicacy." He does not allude to turning backwards. The personal experience of every practitioner is to him a guide more to be depended on than all authority. I will venture to present only two cases. The first, to demonstrate that either hand may be used. The second case to prove that the turning backwards is impossible. The first case occurred in the very early part of my practice, an old midwife, Mrs. Hays, probably known to some members of this society, sent for me to turn in a shoulder presentation. The liquor amnii had long been evacuated, the woman was powerful, the womb thoroughly contracted; I was almost without experience. I first introduced one hand and after much difficulty seized a foot. The violent contractions

soon paralyzed my hand; I then introduced the other, with the same result; again the first. Eventually I delivered, and to this day I do not know which hand did the most work, I used one as well as the other. At that time I was convinced that it mattered little which hand was employed. My subsequent experience teaches me to use them indifferently. The second case occurred since the last meeting of this society in December. Two physicians and a midwife had been in attendance for many hours. One medical gentleman was not present when I got there. He had been some hours previously. This was a very difficult case. The waters had been long evacuated, and repeated efforts had been made to turn without success. After introducing my right hand, I seized a foot with the greatest difficulty, and at once the idea occurred to me that I would try to see if I could pass the foot over the breech as an experiment. I soon found that was impossible, so I desisted. The uterus was well contracted. I then tried to extend the thigh, and failed. The only direction in which the foot could be moved was the proper direction, viz: towards the os. In trying this experiment I felt sure of myself, if I could have started to turn in the wrong direction I could easily have corrected the fault; but it could not be done, and it can not be done in a contracted uterus. It might be started in a wrong direction in a case where the liquor amnii was still present, but then I am certain it would soon rectify itself by the child turning in the waters to the proper position. And now may I ask: has any member of this society personally known of a case of turning backwards? If so, I will admit I am wrong. Podalic version is the grand operation of midwifery, while not seemingly so formidable as Cesarean section, it is often more difficult to accomplish. It consists in introducing either hand, seizing one or both feet or knees—one I think preferable—and bringing down the part seized. This will cause the fetus to revolve on its axis. The presenting part ascends—the breech comes down, and when in the strait, labor is completed as in all breech presentations. Now it is very possible to dislocate or fracture a bone in performing this operation, and it is possible to fail; but I do not believe it possible to turn backwards; certainly not to break the back of a child.

ST. LOUIS MEDICAL SOCIETY.

CEREBRAL LOCALIZATION.

Address by H. H. Mudd, M. D., President.

Gentlemen of the St. Louis Medical Society:

I thank you for the honor conferred upon me. Our society is composed of 160 members. We have youth, enthusiasm and industry; we have age, experience and wisdom in our midst. We have men in our society whose minds are active and precise in their conceptions—men of culture and comprehension—men of scientific attainments, and we, as a society, are able to discuss intelligently the intricate problems of life and health, of disease and sickness.

These problems are of vast importance to all humanity and of absorbing interest to the physician.

In such discussions we should set aside all personal feelings and rise to the level of severe scientific criticism. We should forget ourselves in the interest we have in the subject. The intellectual functions should, for a time, dominate sensory impulses. The frontal lobes should rule—the occipital be subordinate, and the psycho-motor zone act only in expression of reflective consciousness.

The brain is an organ of the mind, each mental operation prompts its functional activity. As a condition essential to nervous activity in all of the higher animals we recognize the existence of efferent sensory tracts carrying sensations to a ganglionic center composed of cells and efferent motor tracts conveying motor impulses.

These fundamental facts of anatomy as well as analogy point to the conclusion that "identical mental operations will always be associated with functional activity of identical tracts of nerve fibres and cells in the brain and its dependencies."

These tracts and these nerve cells or ganglia are localized, circumscribed; and their functional activity is always the same. It is no proof that these tracts are not well defined, because we fail to trace them through the intricate anatomy of the cerebral

hemispheres, nor does it seem to me that, because we may have an overlapping of the different perceptive and volitional centers, this is an argument against localization of functions in the convolutions.

Again, in such an intricate structure as the brain there must be a degree of inter-dependence of its various parts. It is not complete and perfect in any of its parts except as it is perfect as a complete whole. This must be conceded but should not be allowed to militate against the truth of Ferrier's doctrines.

The doctrines of cerebral localization are now awakening world-wide interest among scientific men. Experimental physiology has elucidated, and observations at the bedside are confirming, many of the facts set forth by the exponents and the enthusiastic workers in this department in their endeavor to localize cerebral functions.

The nervous system in all higher animals is composed of nerve fibres and nerve cells, together with an intermediate basis substance where these cell units are aggregated—afferent sensory ganglionic centers and efferent motor tracts.

The centers of simple reflex or excito-motor action are found in the spinal cord, the medulla being the part which controls the more complex reflex actions—such as respiration, the circulation and the vaso-motor influences. The cerebellum and the mesencephalic ganglia, regulate the complex forms of activity involved in locomotion, equilibration and emotional expression. The cerebellum may be cut off without seriously disturbing the functional activity of the mesencephalic ganglia and without destroying conscious sensation and voluntary motion.

Just here it is well to recall a fact which is well established by experiments upon inferior animals, that the independence of the mesencephalic ganglia and the cerebellum are in invese ratio to the development of the cerebral hemispheres.

The localization of these different functions has been long well determined, and is definitely established with more or less precision.

In 1870, Fritsch and Hitzig established by a series of experiments the fact that the direct application of the faradic current to the surface of the hemispheres in certain well defined regions caused movements. This fact, as also, the still more important fact that the irritation of certain circumscribed areas

were always associated with definite muscular contraction, is well proven.

It was before this generally believed that the cerebral hemispheres acted as a unit, as a composite mass, which represented the site of conscious sensation and volition, but it was not believed that definite functions could be ascribed to the different regions of the cerebrum.

Ferrier, in his works, asserts positively that definite areas of the cerebral hemispheres have certain well-defined functions and supports this theory by many facts deduced from experiments upon the monkey, in which he irritated different portions of the brain by the use of the faradic current. The definite muscular activity resulting from this irritation cannot come from its conduction to the basal ganglia, for when we apply the current directly to the basal ganglia there is a general muscular spasm and not the definite, localized, circumscribed activity that we get from irritation of particular convolutions.

Clinical observations offer many confirmatory evidences of the localization of functions in the cerebral convolutions. Let us look for a moment at the anatomy of the hemispheres, and see whether we find in the normal structure of the part any reason to believe in this localization.

We have the gray matter of the hemispheres distributed in two different distinct regions· 1st The central ganglionic masses composed of the thalami optici and corpora striata or basal ganglia. 2d. The laminæ of gray substance every where present on the surface of the convolutions.

Charcot in his work on "Localization in Diseases of the Brain," well describes the central ganglia and their relations.

The white band running upward through the central ganglia, Charcot terms the internal capsule. It is the medium of communication between the cortical centres and the medulla and the basal ganglia.

It is composed almost entirely of white connecting fibres which pass through the crura of the brain and the convolutions. Above and to the inner side we have the gray nuclei of the thalamus opticus, below and to the outside of the internal capsule, we have the lenticular nucleus of the striated body.

Perhaps the most authentic and best established localized function in the cerebral cortex, is the psycho-motor zone of

Ferrier, which is grouped about the fissure of Rolando.

About this fissure is an arrangement of the gray laminæ which is somewhat peculiar to this region, and confirmatory of the experimental facts of Ferrier.

Here are found pyramidal motor cells, giant cells which resemble very much the multipolar motor cells of the anterior cornua of the spinal cord.

These cells are very largely developed in regions in which Ferrier, by experimental physiology, has located motor activity. We find upon the occipital and sphenoidal lobes in which sensory functions have been located,(if to them can be assigned definite functions,) granular cells very different from those of the motor zone. Thus histological researches confirm the doctrine of cerebral localization.

Before considering the anatomy of the circulation of the brain, we will look a moment at the difference in character of the diseases of the spinal cord and of the brain. The so-called systemic lesions of the cord are well understood, and distinctly circumscribed. They may involve only the anterior cornua, the lateral fasciculi or the fibres of Goll. Spinal localization has been very accurately defined by the systematic study of these various conditions.

Charcot says this character of lesion is found occasionally in the rachidian bulb, but above this point we find an entire change in the character of disease. In the brain the circulation is the key to the pathological changes. Hence it is important to consider somewhat carefully the manner of circulation in order that we may be able to perfect ourselves as far as possible in regional diagnosis of cerebral lesions. Circumscribed diseases of the brain are generally dependent either upon thrombosis, embolism or hemorrhage or changed nutrition produced by disturbed vascular supply. These sources of disease are active also in the intermediate structures formed by the medulla and the pons varolii, but we do not find any such conditions appertaining to diseases of the cord proper.

The circulation of the cerebral hemispheres, the manner of the distribution of the arteries, the isolation of the central ganglia from the cortical layer, indicate independent activity.

According to Duret and Heubner, from whom much of the precise knowledge of recent date concerning the circulation of

the brain is derived, there are two systems of vessels, the central and the cortical systems; the central system, being derived very largely from the Sylvian or middle cerebral artery; the anterior cerebral supplying only a small portion of the central ganglion, while the posterior cerebral supplies a part of thalamis optici.

From the same trunks, but further out, are derived the vessels for the cortical system of nutrition.

These two systems are entirely independent, and have no manner of communication in their peripheral distribution. The circulation of the central ganglia is entirely distinct and separate from that of the cortical. There is an intermediate zone between the two which is poorly nourished, and which is the seat, frequently, of senile softening.

The arteries of the central system are given off at right angles from the trunks of the Sylvian arteries, as they run along the inferior surface of the brain, and may be divided into two sets, first, those supplying the anterior portion of the internal capsule, and second, those supplying the posterior portion of the internal capsule. These branches are distributed in the central mass, and have but slight, if any, peripheral anastomosis with each other.

The cortical branches of the Sylvian artery pass out and break up into primary and secondary branches, which ramify in the pia-mater, and run parallel with the surface of the cerebral convolutions. From these ramifications are derived the nutrient arteries which penetrate the gray cortex and pass into the convolutions, and converge towards a central point.

Charcot thinks that for the present we may say that our ability to discrimimate in the regional diagnosis of lesions of the central mass consists in our ability to recognize disturbances of the internal capsule. We can often determine whether the anterior or posterior portion of the capsule is involved in disease, for in the one we may have hemi-anesthesia and in the other simply hemiplegia.

In cerebral topography there are some well marked fundamental fissures. The Sylvian fissure with its anterior vertical and its posterior horizontal arm divides the anterior from the middle lobe of the brain. Running vertically upwards from near the anterior portion of the horizontal limb of the Sylvian

fissure is the fissure of Rolando, which passes upwards and inwards to the longitudinal fissure. Upon either side of the fissure is situated the motor zone of the cerebral hemisphere, composed in front of the ascending frontal convolution, and the posterior part of the first frontal convolution. Posteriorly is the ascending parietal convolution and near the median line is included apart of the parieto-occipital lobe.

Extending forward from the ascending frontal convolution are two fissures nearly parallel with the longitudinal fissures which divide the frontal lobe into the first, second and third frontal convolutions. The frontal lobes are the seat of the intellect, the posterior inferior part of the third frontal being the centre of speech.

In the parietal lobe is the inter-parietal sulcus, below which is the supra-marginal convolution and the angular gyrus in which is located the centre of sight.

Below the fissure of Sylvius, is the temporo-sphenoidal sulcus which separates the superior from the middle sphenoidal convolution.

In the superior temporo-sphenoidal convolution is located the centre of hearing, while in the middle and inferior temporo-sphenoidal convolutions are the centres of smell and taste. If we can ascribe to the convolutions in the occipital lobes special functions, it is in connection with the functions of organic life, the sense of general well or ill being, as evidenced in nutrition or in the condition of the gastro-intestinal canal. Looking on the inferior surface of the cerebrum we see the dentate fissure close to the posterior border of the corpus callosum, and continuous with it posteriorly we have the calcarine sulcus. External to this, between it and the collateral fissure is a convolution extending toward the anterior part of the middle lobe, the uncinate convolution or the hippocampal region in which is located tactile sensation.

If we are to make use of these deductions of experimental physiology in our practical work as physicians, it will be after we have learned to locate exactly and describe with anatomical precision the lesions that we find in post-mortem examination. Clinical examinations made during the progress of the disease, without a knowledge of the facts of localization as taught by experimental physiology, will not be made with sufficient accu-

racy to know whether the lesions found on post-mortem examination are confirmatory or not of the doctrines of cerebral localization.

The precise relation of the fissures and convolutions to the prominent points of the skull is of clinical importance. Extending across the anterior portion of the skull is the coronal suture; behind is the lambdoid. These two sutures divide the skull into the frontal, the parietal and the occipital regions.

The parietal region is divided by a line running vertically through the parietal eminence into the anterior and posterior parietal region.

Each one of these is subdivided by a line drawn along the temporal arch into a superior and inferior anterior or posterior parietal region.

If I draw a line through the anterior parietal region from the sagital suture to the point of junction of the spheno-parietal with the sqamo-parietal suture, I shall outline very closely the position of the fissure of Rolando and about this we find the psychomotor zone which is included almost entirely in the anterior parietal region.

The postero-parietal lobe in which is located the centre of motion of the leg and foot, as in locomotion, extends into the upper portion of the post-parietal region. In cranial topography, the cortical centre of sight is about the parietal eminence; hearing in the lower antero-parietal region, smell and taste in the temporo-sphenoidal regions, while the tactile sense is more deeply placed.

In 1878 I had an opportunity to observe a case which involved the psychomotor zone and which gave evidence of the irritability of the cerebral cortex, this irritability being evident in convulsive movements of the limbs. The man received a blow upon the head, which injured, contused, the bone and induced inflammatory softening of the osseous tissue, but no inflammation of the membrane, neither was there any pressure upon the brain. The injury was inflicted just above the parietal eminence and about one and a quarter inches from the middle line. Fifteen days after the injury the man noticed a twitching of his right leg which was involuntary, and which increased from hour to hour until he was seized with epileptic convulsions. The site of injury corresponds exactly with the situa-

tion of the convolution, as located by Ferrier, which is active in producing motions of the leg. I trephined the man, removed the inflamed and softened bone, thus removing the point of irritation. The spasmodic contractions disappeared and the man rapidly recovered.

Dr. Hall, of the northern part of the city, had under observation a man aged 42, shot accidentally Dec. 27th, 1880; the ball entered the centre of the forehead two inches above the eyebrow. Entering the skull it passed through the posterior portion of the first frontal convolution, and impinged upon the skull about one and one-half inches in front of the occipital bone to the right of the median line. From this point it dropped down towards the superior curved line of the occiput, passing through the occipital lobe.

As you will observe, the track of the ball injured first the convolution active in controlling the lateral motions of the head, and elevating the eyelids; it then passed through the greater portion of the motor zone of the arm, of the hands and legs, left untouched the convolutions presiding over the muscles of the face, and angle of the mouth, of the lips and the tongue.

The symptoms, in this case, indicated very nearly the track of the ball, for during life he had inability to elevate perfectly the eyelids; he had complete hemiplegia of the left side, but could talk; there was but little distortion of the muscles of the face, the lips responded to the stimulus of the cup placed to them, and he drank, although he did not complain of hunger nor of thirst.

The peculiar symptom of his case was, that upon touching the paralyzed side of the body, he recognized in every instance the touch, but instead of referring it to the point touched, he invariably referred it to the corresponding point upon the opposite side of the body. If symmetrical points were touched at the same moment, he recognized only the touch upon the sound side.

It will be observed that in the description of this injury to the brain, the Hippocampal region, the site of tactile sensation was undisturbed.

SELECTIONS.

LIFE, CHARACTER, AND SERVICES OF JOHN HUNTER.

By Professor S. D. Gross.

Abstract of an address delivered before the Academy of Surgery, Philadelphia. January 12th 1881.

With the exception of Hippocrates, the father of medicine, John Hunter is the grandest figure in the history of our profession. I make no exception in favor of Ambrose Paré, the father of French surgery and the inventor of the ligature for the arrest of hemorrhage, a contrivance which has been instrumental in saving so many lives; of Albert von Haller, the father of scientific physiology; or even of Xavier Bichat, the founder of general anatomy, and one of the most remarkable men that have ever lived. Shall we make an exception in favor of William Harvey? No; I will not exclude from this list even the immortal discoverer of the circulation of the blood. Great as these men were, and vast as are the blessings which they have conferred upon their race, it is no disparagement to them to say that John Hunter was, in many respects, their superior: not in learning, for herein Haller had greatly the advantage; not in the amount of suffering which he has been instrumental in relieving by his surgical writings, for in this respect Ambrose Paré was fully his equal; not even in inventive genius, for here it will be found that Bichat, who created a new science before he was thirty years of age, was not a whit his inferior. While Hunter had many traits of character in common with these and other great men, he possessed some features that were peculiarly his own. He was not only a great surgeon, a wise physician, and a great anatomist and physiologist, human and comparative, but, above all, he was a philosopher whose mental grasp embraced the whole range of nature's works, from the most humble structure to the most complex and most lofty. He was emphatically the Newton of

the medical profession, and what Pope said of that great philosopher may, by paraphrase, be said with equal force and truth of Hunter:—

> "Nature and Nature's law lay hid in night;
> God said, 'Let Hunter be,' and all was light."

Of the boyhood of Hunter very little is known. He was the youngest of ten children, and was born at Long Calderwood, Lanarkshire, Scotland, on the 14th of February, 1728.

At the age of ten John was left an orphan, in the sole care of his mother, who, although a woman of strong mind, failed to exercise much influence over him. At the age of seventeen, or thereabout, learning that his brother-in-law, a cabinet-maker at Glasgow, married to a sister whom he dearly loved, was laboring under pecuniary embarrassment, he paid him a visit, and for a time assisted him in his business, not as an apprentice, but a volunteer, working probably at small wages, or simply for his board and clothing. It was this circumstance which induced some of his envious contemporaries to assert that in early life he had been a wheelwright or a carpenter,—a statement for which there is not the slightest foundation in truth. Tiring of an occupation which, it may be presumed, had nothing congenial in it, and hearing that his brother, Dr. William Hunter, who had been living for some time in London, was doing a large and lucrative practice, and rapidly growing in reputation, a desire seized him to visit what must have appeared to his heated fancy as a sort of Eldorado. The meeting between the two brothers was cordial, and arrangements were at once effected by which John became an assistant in William's anatomical rooms, which, although only recently opened, had already acquired marked celebrity on account of their educational advantages. It was there that young Hunter first became aware of his latent powers, and threw off the incubus which had so long oppressed his soul. A new life broke in upon him; his ambition was aroused; industry, steady and unremitting, took the place of idleness, and the undecided, wavering, erring youth, stimulated by the new atmosphere in which he was now daily immersed, assumed the attitude and the assured character of the philosopher and the student of nature.

However this may be, his proficiency as a practical anatomist

was so very rapid that before the end of twelve months he was intrusted with the preparation of his brother's subjects for his anatomical lectures; and in 1755, seven years after his arrival in London, he was admitted to a partnership in his private school. Long before this time he had acquired great reputation among his classmates as an expert dissector and an excellent anatomist. He had now become an active, industrious worker, thoroughly in love with his occupation. The summer of 1749 was spent by him at Chelsea Hospital, under the instruction of the celebrated Cheselden, who was then nearing his grave; and in 1751 he became a pupil at St. Bartholomew's Hospital where he availed himself of the teachings of the not less renowned Percival Pott, another great luminary of British surgery. It has been stated that Hunter's early education was sadly neglected. Whether it was that he was himself painfully conscious of the fact, or, what is much more probable, because his friends urged him to take the step, he entered, in 1753, as a gentleman commoner at St. Mary's Hall, Oxford, His brother William was very anxious that he should abandon surgery and study medicine, which was at that time regarded, and, perhaps, not without reason in the then existing state of the science, as a higher branch of the healing art. With this end in view it was deemed very desirable that John should have a respectable knowledge of Greek and Latin, as no physician was considered as being properly educated without it. The effort, however, proved abortive. Hunter was now twenty-five years of age, and he had no disposition to shut himself up within the narrow walls of a college, or to give up the idea, formed soon after he settled in London, of becoming a great surgeon. He looked upon such studies as a waste of time, and in referring to the subject, some years afterwards, he thus feelingly expressed himself: "They wanted," he said, "to make an old woman of me, or that I should stuff Latin and Greek at the University; but," added he, significantly pressing his thumb-nails on the table, "these schemes I cracked like so many vermin as they came before me." One cannot but regret that Hunter did not carry out the wishes of his friends. A little "stuffing" of Latin and Greek would have been of vast benefit to him in preventing those errors of style and of literary composition which so greatly disfigure and obscure his writings.

In 1754 Hunter became a pupil at St. George's Hospital, where two years later he received the appointment of house-surgeon. This position he retained, however, only for a short time; for, owing to his incessant labors, his health was beginning to suffer, and fears were entertained that he was threatened with phthisis. This compelled him to seek safety in change of air and scene. Through the agency of his friends he was made a staff-surgeon, and was at once sent with the army to Belle Isle, an island off the western coast of France, where he enjoyed ample opportunities for the study of diseases and accidents, and gathered materials for the composition of his work on gunshot wounds. These opportunities were further enhanced the following year during the war in the Peninsula. On the restoration of peace in 1763, Hunter returned to London, invigorated in health, and loaded with new knowledge, but poor in pocket, having saved little, if anything of his pay as a military surgeon. His struggles as a young practitioner in the great metropolis were long, arduous, and disheartening. The few connections which he had formed before he joined the army were lost to him, and his place in his brother's dissecting-rooms and amphitheatre was occupied by Mr. Hewson, a young but rising anatomist, afterwards so celebrated for his discoveries in the lymphatic vessels. He had, therefore, now nothing to depend upon but his half pay and his own indomitable will, stimulated by his necessities and by his lofty ambition.

In order to increase his income, as well as to afford himself useful occupation, Hunter now opened a school of anatomy and operative surgery, and delivered regular courses of lectures. He also took private pupils, each of whom was apprenticed to him for five years, at a fee of five hundred guineas, a sum equivalent to about $2650 of our money; but after all not so large when it is recollected that it included board and lodging. This practice of taking private pupils was continued until within a short time of Mr. Hunter's death.

Good anatomist and experienced surgeon as he had long been known to be, it was not until he was forty years of age that he received a hospital appointment. In 1768 a vacancy occurred in St. George's Hospital, to which, through the influence mainly of his brother, Dr. William Hunter, he was

elected by a large majority over his competitors. This position, one always eagerly sought by young men, gave him a new start, and his practice immediately increased in consequence. Indeed, his fortune as a surgeon was now fully assured. He no longer lacked patients, and the rigid economy which he had been obliged to exercise in his daily outlays gave way to comparative affluence. He now bought a lot of ground at a place called Earl's Court, about two miles from London, and erected a large and commodious house, still famous as his former residence. In 1771, at the age of forty-three, he married Ann, the daughter of a surgeon in General Burgoyne's Light Horse, and a sister of Mr., afterwards Sir Everard, Home, whose ultimate career is so intimately connected with that of Hunter.

The house at Earl's Court was erected for the express purpose of accommodating his preparations, which already amounted to a cumbersome collection; but it also served as a summer residence for the family. On the spacious grounds now at his command he gathered a large number of animals, birds, fishes and reptiles, as well as various other objects of natural history; and one of his favorite amusements in the summer and the autumn, after the labors of the day were over, was to ramble among these creatures, in familiar intercourse, petting and talking with some, and preserving friendly relations with all.

His habit was to rise at four o'clock in the morning, to spend from four to five hours in his dissecting-rooms, and then to step into his carriage to make his daily rounds among his patients. He had no fondness for surgical practice or consultations, and attended to business only because it afforded him the means of purchasing objects of curiosity or of natural history, saying, as he laid aside his scalpel and forceps, "Well, Lynn," a pupil and an intimate friend, "I must go, and earn that d——d guinea, or I shall be sure to want it to-morrow."

Notwithstanding his want of scholarship and the labor with which he composed, he was a prolific writer. Many of his contributions, especially those on comparative anatomy and physiology, found their way into the Transactions of the Royal Society and other publications, in which they generally elicited much attention. His first systematic work was his Treatise on the Natural History and Diseases of the Human Teeth, the

first part of which was issued in 1771, and the second seven years later. The work was well received, and greatly enhanced his reputation as an acute observer and investigator.

The Treatise on the Venereal Disease appeared in 1776, followed by a second edition in 1778. Having been long and impatiently expected, it at once attracted general attention. Although extraordinary care had been bestowed upon its preparation, it abounded in blemishes, for the correction of which the author availed himself of the services of a committee of three of his most learned and accomplished friends. His account of venereal affections was for upwards of a third of a century the best authority on the subject in any language, and his description of the indurated chancre is so graphic and distinct that it will always be called by his name.

The Treatise on the Blood, Inflammation, and Gunshot Wounds, a work of vast labor and the most patient research, and upon which Hunter's fame as a surgeon and a medical philosopher largely rests, was published, in 1794, under the supervision of Dr. Matthew Baillie and Sir Everard Home, only about one third of the proofs having been revised by the author at the time of his death. Notwithstanding Hunter strove to render the work as perfect as possible, it was obscured by numerous errors of style, and the punctuation was execrable.

Hunter never verified Bacon's maxim that "writing makes an exact man." His style seems to have been little, if any, better in his later than it was in his earlier years, when as a raw student, he entered upon his gigantic work. There are men who never speak or write grammatically; they cannot overcome the defects of their early education; and of this class of men John Hunter was a remarkable example.

With the exception of an attack of pneumonia in 1759, Hunter enjoyed excellent health during the first forty years of his life. In 1769 he was seized with a severe fit of the gout, which greatly alarmed him, as it was attended with excessive pallor of his countenance, and, for nearly three quarters of an hour, with total extinction of the pulse, and almost entire absence of breathing. Notwithstanding this he soon resumed his labors, which now, however, began seriously to undermine the powers of his constitution, which was still further impaired in

1775 by a spasmodic affection of different parts of the body, preceded by symptoms of his former complaint. The heart at length became involved, and on one occasion the paroxysm was so violent as to cause syncope.

Hunter was so painfully sensible of his situation that he was wont to say to his friends that his life was in the hands of any rascal who chose to fret or worry him. It is therefore not surprising that these attacks should have rendered him nervous and irritable, and less capable of controlling his naturally impetuous temper. His final hour came at last; death, sudden and unexpected, overtook him at St. George's Hospital, at a meeting of the governors and of the surgical staff of that institution, called on business of importance connected with the admission of pupils and the mode of instructing them. During the discussion which ensued Hunter made a remark which one of his colleagues considered it necessary at once flatly to contradict. Choked with angry and tumultuous emotions, Hunter immediately ceased speaking, and, hurrying into an adjoining room, fell, with a deep groan, lifeless into the arms of one of the attending physicians. All attempts to revive him proved abortive.

An examination of the body revealed the existence of ossification of the mitral valves of the heart and dilatation of the aorta, with thickening of its valves and degeneration of its coats. The coronary arteries were converted into long, rigid tubes. The heart itself was uncommonly small.

In person Hunter was of middle height, but very strong and robust, with a very short neck, broad shoulders, and a broad expansive forehead, denotive of high cerebral development. His eyes and complexion were light, his brows heavy, his cheeks rather high, and, as one of his biographers expresses it, his mouth was somewhat underhung. His hair, in youth, was inclined to red, but as he advanced in life it became gray, and at length partially white. He possessed great powers of endurance and required little sleep, often working, with hardly any intermission, for nearly twenty hours out of the twenty-four. In his manners he was unostentatious and rather cold and reserved; in his dress plain and simple, and not always particularly neat. He wore, as was then the custom, short breeches,

with knee and shoe buckles.[1] His temper was warm and impulsive, and, although he was naturally kind, he often betrayed ill-feeling, especially when any one "galled his patience," or when he was over-crowded with business, unusually fatigued, or entirely occupied upon some interesting and absorbing investigation requiring uncommon patience, deep thought, or persistent effort. At such times his irritability occasionally got the advantage of his judgment and good breeding. Is is related of him that, returning late one evening more than ordinarily worried and fatigued, he found a large party of ladies and gentlemen assembled in his drawing-room. Feeling excessively annoyed at this unexpected sight, he gave way to his passion, exclaiming: "I ought to have been informed of this kick-up, and as I have come home to study I hope the company will now retire," which they of course at once did.

For many years, as previously stated, he spared neither pains nor expense in procuring all kinds of living animals, birds and reptiles, with a view, not only of studying their habits, but also for experimental purposes, and for the illustration of comparative anatomy and physiology. The labors at Earl's Court were not of a flickering or paroxysmal character, but were continued with hardly any intermission through his whole professional career, the daily sustenance and stimulus of his existence. They always formed the early exercises of the day, generally from six to ten o'clock, when he was obliged to abandon them in order that he might earn that "damned guinea," as he was wont to call it, which stood so much in the way of his tastes and happiness, and yet was so necessary for the supply of his daily wants.

The kind of life led by Hunter was not calculated to make him a popular practitioner. His colleagues at St. George's Hospital especially disliked him, and the feelings of animosity engendered by his disagreeable conduct occasionally broke out into open hostility. His practice for many years was large and lucrative, and greatly increased in both these respects after he

1. Of the various portraits that are extant of him, that by Sir Joshua Reynolds is by far the best. It represents him as sitting in a chair in deep thought, with a pen in one hand and the other supporting his chin. From this portrait an admirable steel engraving was made by Sharp, a celebrated artist, copies of which were widely disseminated, and still adorn many a surgeon's study. After his death a bust of him was made by Flaxman, in the execution of which he was assisted by a cast taken during life.

was appointed court surgeon. All accounts go to show that he was most patient and painstaking in the investigation of his cases, and most cautious in the expression of his opinions. If he found himself at a loss in determining the diagnosis, he did not hesitate to acknowledge it and to ask for further time. He would merely say: "I can not tell, at present, what to recommend; I must think of it." With Hunter, as with every honest and conscientious man, every case was a study, not to be lightly passed over, or treated with heartless indifference. He was always particularly condescending to his poorer patients during consultation hours at his own house. No matter how many "grandees," as he called them, might be present, he generally gave precedence to the former, saying they had no time to spare, whereas the others, having nothing to do, could afford to wait. He would sometimes deduct largely from a stipulated fee for an operation, if he found that a person had unusual difficulty in raising the money.

Notwithstanding his profound knowledge of anatomy, Hunter never ranked high as an operator. The fact is, Hunter had no very exalted opinion of operative surgery. An operation, he remarks, is a reflection on the healing art, a tacit acknowledgment of the insufficiency of surgery. Whether Hunter was ever extensively engaged in operative surgery does not seem to be known.

Hunter's doctrines were not well received by his immediate English contemporaries. They could see in them nothing of any particular value, and concluded that nothing good could come out of Nazareth. Many regarded his teachings with contempt, as the offspring of a conceited man, and as nothing better than what they could find in their own libraries. It is not known whether, like Harvey, he suffered in his practice from this cause. No wonder that he was occasionally disheartened. "The few good things I have been able to do," he was heard to say, "have been accomplished with the greatest difficulty, and encountered the greatest opposition."

Hunter had been engaged almost ever since his return from the army in teaching anatomy and surgery at his own residence; but in 1773 he determined to become a public lecturer, assigning as a reason for the step that his doctrines were often misunderstood or willfully misrepresented, and that, therefore, it

was due to himself to place them in their true light before the profession. The lectures were delivered gratuitously during the first two winters at St. George's Hospital, but after this period he charged the same fee as other teachers, and they were thenceforth given in a room in Leicester Square, hired expressly for the purpose at his own expense. They were repeated annually until 1792, when his arduous labors compelled him to resign them in favor of Sir Everard Home, who had long been his private as well as hospital assistant.

As a lecturer Hunter was not popular or particularly instructive. His manner was dull and prosy, and he seldom raised his eyes from his note-book; his statements were often contradictory, and occasionally he lost the train of his thoughts or wandered from his subject. His language, rarely elegant, was at times coarse and even vulgar. Lecturing was a formidable task for him, and he sometimes felt so uncomfortable as to be compelled to take laudanum to compose his nerves. His classes never exceeded fifty, even in his best days, and not one-half that number, says Ottley, derived much benefit from his teachings.

Notwithstanding that Hunter enjoyed for many years a large and lucrative practice, as the most renowned surgeon of the English metropolis, it is not surprising, when we consider the vast sums of money which he lavished upon the purchase of objects of natural history and pathological specimens for enriching his museum, that he should have died poor[1] It may safely be asserted that he was the only man who ever paid five hundred pounds for a human skeleton, and this is only one example of his extravagance. Apart from his museum, to the construction of which he devoted so many of the best years of his life, he left but little at his death but debts. To liquidate these absorbed almost the whole of his estate, real and personal. The result was that Mrs. Hunter and her two surviving children were left in such straightened circumstances as to require for several years aid from the king's bounty, kindly procured by disinterested friends. The executors, in compliance with the provisions

1 "In the first eleven years of his practice, from 1763 to 1774, his income never amounted to a thousand pounds a year; in the year 1778 it exceeded that sum; for several years before his death it had increased to five, and at that period was above six thousand pounds. Life by Home.

in the will, offered the museum, in which lay the only hope of their future support, to the government, which, finally, in 1796, six years after Hunter's death, by a vote of parliament purchased it for the sum of fifteen thousand pounds, hardly one-fifth of its original cost. By the government the museum was soon after transferred to the Corporation of Surgeons, who, the following year, under a new charter obtained from the crown, assumed the name and title of the Royal College of Surgeons. The funds of the corporation, when this trust was accepted, were in a very low condition, and they would have been compelled to reject it if their new charter had not given them permission, by placing the whole subject of the surgical education of the country into their hands, to examine students for the diploma for membership, which yields annually a large revenue for the increase and support of the museum and of the College.—*Boston Med. and Surg. Jour.*, Feb. 3, 1881.

At a meeting of the New York Academy of Medicine, held January 20, 1881, the following resolution was adopted:

Resolved, That a committee be appointed by the President to investigate the extent to which leprosy prevails in the United States.

The President appointed as such committee, Drs. H. G. Piffard, F. R. Sturgis and G. H. Fox.

The committee are desirous of ascertaining the actual number of Lepers in the country at the present time, and to that end respectfully request any physician who may know of the existence of a case in his neighborhood to communicate the fact to the chairman of the committee, at No. 10 West 35th St., New York.

Dr. Hammond's daughter, the Marquise de Lanza, has just completed a novel, to be published by the Putnams, the plot of which turns upon the idea of double consciousness. The heroine, while in the "second state," engages herself to be married, and when she recovers her normal condition has forgotten all about it. Dr. Hammond will write a preface to the book on the subject of double consciousness.—*Boston Med. and Surg. Jour.*, Feb. 3, 1881.

NOTES AND ITEMS.

The Alumni Association of the St. Louis Medical College held their annual reunion and banquet in the Ladies' Ordinary, at Faust's restaurant, Wednesday evening, March 2d. The evening was spent very pleasantly, as is always the case where a company of the older and younger members of the profession is brought together socially. In the course of the evening, becoming tribute was paid to the memory of Dr. Jno. McDowell by several of those who had been best acquainted and most intimately associated with him in the college, and arrangements were made for securing a portrait of the late Professor, to be hung up in one of the rooms of the college.

The Fortieth Annual Commencement of the Missouri Medical College was held at Mercantile Library Hall, on Wednesday evening, March 2d. Diplomas were awarded to one hundred and nineteen graduates. The number of students in attendance at this college during the past year was two hundred and seventy. The address to the class was made by Hon. Albert Todd. A pleasant feature of the exercises was the presentation, by Mr. Charles Gibson, to the society of a superb portrait of the founder of the college, the late Prof. Joseph Nash McDowell.

The St. Louis Medical College graduated a class of forty-three students on Thursday evening, March 3d. The valedictory address in behalf of the faculty was delivered by Dr. J. B. S. Alleyne. Twenty-five of the class had attended three courses of lectures. Hereafter an attendance upon three courses of lectures will be one of the requirements for graduation in this school. The number of matriculants during the year was one hundred and fifty-two.

The College of Physicians and Surgeons of St. Joseph graduated a class of fourteen members. The valedictory on the part of the faculty was given by Dr. Jacob Geiger.

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ORIGINAL ARTICLES.

LIGATION OF ARTERIES FOR THE CONTROL OF INFLAMMATION, WITH A CASE.

BY H. H. MUDD, M. D., ST. LOUIS.

[*Read before the St. Louis Medico-Chirurgical Society.*]

THE powerful influence exerted by the ligation of the artery on the nutrition of a part, will justify us in considering the dangers and advantages of such an operation in the control of the inflammations which so frequently occur about the hand and arm; inflammations which often destroy the usefulness of the member, and entail suffering and danger to the patient.

Can we control inflammatory action by thus limiting the supply of blood to the inflamed part?

Irritation and pain in a part, will induce an afflux of blood, and this increased flow, in itself, is a powerful predisposing element to subsequent inflammatory action,

for inflammatory action is largely determined by the supply of blood to the part.

But it has been contended that if we could entirely control, or limit, the supply of blood, so as to cut off, for a time, inflammatory action, the focus of irritation would still remain, and the inflammatory action be again excited as soon as the supply of blood was returned to the part; in other words, a vitiated nutrition of the part may be the origin of, and maintain indefinitely, an inflammatory action. John Hunter says: "Action creates the necessity for support and supplies it." That is, the inflammatory hyperemia is a symptom and a legitimate sequence of textural excitement.

Again, John Simon, in his article on inflammation, Holmes' Surgery, volume I, page 42, says: "The obliteration or narrowing of the arteries, not enough to cause gangrene in man, but enough almost to exsanguinate the affected part, may cause chronic inflammation."

With authorities so doubting the efficacy of the control of the vascular supply in limiting inflammatory action, we may well hesitate before we ligate an artery for the arrest of inflammation. It is certain that we may drain the circulation to its utmost possible limit, compatible with life, yet the inflamed part will be the last to become bloodless. Simon has thus pertinently queried: "Would the inflamed part not be more prone than other parts to fall into gangrene from anemia?" I am not inclined to think it would, and I am satisfied that we have in the ligation of arteries a useful therapeutic measure in phlegmonous inflammations.

It is an established fact, in surgery, that where you have had the condition of partial obstruction in an artery, before its complete obliteration, in other words, where the collateral circulation has been slowly developed by the advancing obstruction of an artery, gangrene is much less likely to follow, than it is in such cases as demand immediate ligation without any previous dilatation of anastomosing vessels.

I believe we have something of the same condition in diffused phlegmonous inflammation. The arteries of the part are all dilated, and the collateral circulation is quickly established, and is pretty sure to be sufficient to maintain the vitality of the part.

The collateral circulation having been in part established prior to the complete obstruction of the artery, the limb is much more liable to regain perfect strength than if the circulation was abruptly cut off in a healthy part.

The first effect of irritation of the sensory nerves, is to contract the vessels; this, however, is very transient, and is quickly followed by relaxation and consequent dilatation of the vessels of the part; the current of blood, in the dilated vessels, is slower, but the quantity of blood in the part remains permanently greater during the inflammatory action. The pain and irritation produce a contraction of the proximal end of the arteries leading to the part. This contraction of vessels is not limited to those of the extremity inflamed, but pertains, with more or less effect, to all of the arteries.

The sudden arrest of the flow of blood to the inflamed part, by ligation of the artery, relieves pain by relieving congestion, the nerves are put at rest, and the focus of irritation is removed, the arterial system again resumes its normal condition, the arterial tension is diminished, the normal flow of blood to all parts of the body is permitted and the ligature acts beneficially upon the part, not only through the immediate limitation of supply to the inflamed part, but also through its general influence upon the circulation.

In brief, I think the ligation of arteries for the control of inflammatory action, is a powerful means with which to limit the extent of this inflammatory action and to control its disastrous effects. It is more powerful than bleeding, because it limits the supply of blood to the part without disturbing its quality. Ligation in such cases, I believe, involves no more danger than pertains to the

ligation of an artery in a part free from disease. Indeed it is plausible to assume that there is less danger than in the normal condition, because of the prior dilatation of the vessels. I believe that in controlling the supply of blood, a powerful factor in the production of inflammations, we can arrest, not only those inflammations which are dependent upon this superabundant supply for their food, but we can arrest many of those which had their origin in textural changes of the part.

This remedy is more frequently applicable to the arm than to the leg, for the collateral circulation in the leg is not so free nor so rapidly developed as in the upper extremity.

Dr. H. F. Campbell, of Augusta, Georgia, in 1866, published an article on "The Hunterian ligature of arteries to relieve and to prevent destructive inflammation," in which he gave the detail of 15 cases in which he had used this measure. The first case detailed in this series occurred in 1862. Maunder, in 1867, published a case of the same kind. I have not been able to secure either of these articles.

My attention has been turned to this subject by the observation of a case of phlegmonous inflammation of the hand and forearm, the history of which I will give in illustration of the subject.

F. V, a pale, delicate-looking German, aged 62, suffered about the 26th of September, 1880, a contusion of the little finger of the right hand. This excited a lymphangitis, which involved the hand and the forearm.

He applied to me October 12th, when the hand and arm were very red, quite painful and much swollen. A number of incisions were made in the hand and forearm and a quantity of matter evacuated. The acute inflammation in the hand and forearm rapidly subsided and pain disappeared, but later other foci of inflammatory action became evident, and new openings were made from time to time.

With this renewed inflammation the hand again swelled

and became thick, soft, boggy, and red, as did also the lower part of the forearm.

The pale-red color of the hand and forearm continued, notwithstanding repeated depletions by secondary hemorrhage from ulcerated vessels in the hand.

The arm itself was swollen and distended by a large abscess, which had developed on the ulnar side of the forearm, under the superficial group of flexors, and extended up to within two inches of the elbow. This communicated below under the annular ligament with the suppurating cavity in the hand.

The secondary hemorrhages were quite free. The arm was kept constantly on a splint, and so bandaged as to make compression upon the radial and ulnar arteries near the wrist. This seemed for a time to control the hemorrhage, but it recurred with increased violence during the night of November 14th, and on November 15th an exploratory incision was made in the palm of the hand to determine, if possible, the bleeding point, and to give a more free exit to pus. I found the sheaths of the flexor tendons involved, and the finger passed readily up to the annular ligament.

The hemorrhage on this day had been so free that the patient fainted while lying on the bed with his head only slightly elevated. Yet the arm maintained its reddened, inflamed appearance. I ligated the brachial artery, preferring that to the uncertainty of finding the bleeding point by dissecting up the tissues of the palm of the hand. The arm was then enveloped in cotton wool and allowed to remain on the bed beside the patient, somewhat lower than his body.

Nov. 16th, 1880—Temperature of the hand is good; all redness and edema have disappeared. There is free discharge from the cuts in the palm, a part of the discharge coming from the forearm. There were at this time, upon the palm of the hand, six openings; some of them having been made by incision, and others by ulceration. There was,

also, one situated above the wrist, in the median line, and two openings upon the dorsum, one near the little finger, and the other on the radial side of the hand.

Nov. 19th, 1880—Patient's condition somewhat improved; the arm and hand still discharging sanguineous, purulent fluid; there is but little pain; no redness, and but little evidence of inflammatory action about the hand, except as indicated by the free discharge of matter. A drainage tube was passed from the hand to the upper part of the forearm.

Nov. 30th, 1880—The patient's general condition is much improved during the last ten days; he is now eating well; suffers but little pain, and is gaining strength. The offensive discharge from the arm and hand has disappeared, and there is a free discharge of good, healthy pus. The arm and hand do not seem to be much inflamed and are healing. The ligature from the brachial artery was found loose in the wound, to-day, and removed. The line of incision is healing. There has been no hemorrhage since operation.

Feb. 1st, 1881—During the month of December, the hand and forearm healed. The openings closed and the tissues became firm. The patient is now regaining the use of his hand and arm.

This uninterrupted recovery after ligature of the brachial artery in a man enfeebled by age, who had suffered for six weeks with a phlegmonous inflammation of the arm resulting in ulceration and abscess, inducing a condition of the arm which might be supposed to favor gangrene, is an invitation to further trial of the remedy.

Rest upon a splint, pressure applied as judiciously as possible by means of compresses and bandage, had been used. We had attended as far as possible to the patient's general condition. His strength had been maintained by diet and by tonics; but notwithstanding all these efforts, the arm had remained persistently edematous, reddened, swollen, tissues soft and ulcerating with a constantly increas-

ing disposition to break down. The patient had, during this time, a number of chills, fever more or less constant, with profuse sweats; he had septicemia.

During this time he had been frequently subjected to that powerful antiphlogistic, blood-letting from the ulcerated artery in the hand, without any effect in reducing the inflammatory action, without even lessening the redness of the part.

MALARIAL HEMATURIA.

BY JESSE E. THOMPSON, M. D. SALEM, MO.

THE term hematuria is employed to denote the passage of blood with the urine, either from the kidneys, ureters, bladder or urethra. It is merely a symptom of numerous and varied pathological conditions, and occurs under various types. (1) It may depend upon local lesions arising under a variety of pathological states, such as acute and chronic Bright's disease; acute or passive congestion (hyperemia) of the kidneys; violent muscular effort or straining; external injury; calculus of the kidneys, ureter or bladder; cancer, tubercle or entozoa in any part of the urinary tract; morbid conditions of the urethra or prostate, etc., etc. (2) Hematuria may be supplementary or vicarious to the menstrual discharge, or a hemorrhoidal flux, or a paroxysm of spasmodic asthma. (3) Hematuria may be symptomatic, as when it occurs in scurvy and purpura, in hemorrhagic conditions associated with eruptive, putrid, continued and malarial fevers.

To differentiate these pathological conditions becomes a matter of the very greatest moment as regards prognosis and treatment.

When the bleeding comes from the kidneys there will be symptoms referable to these organs, as heat, weight, or

pain on pressure in the lumbar region. There may be pain more or less severe along the course of the ureters, extending to the inner side of the thigh, or retraction of one or both testes. The blood is uniformly diffused throughout the urine; the last urine voided has exactly the same appearance as that voided first. The urine in renal hemorrhage is brownish-red, or of a dull, smoky tint. Under such circumstances, it is often difficult to differentiate hematuria and hematinuria. Tube casts deposited with the urine unquestionably prove the renal origin of the blood; hence, the microscope is necessary to differentiation of these questions.

It is very difficult to determine its origin from the ureters, as the same train of symptoms is likely to occur as when the blood proceeds from the kidneys.

In the blood disorganization so often present in malarial cachexia, the blood assumes an unnatural fluidity, and soaks out of the blood vessels into the uriniferous vessels. It is often not true blood-globules, but mere hematosin, which passes into the urine from the blood serum; or pigmentation may result from the morbific changes, and may closely simulate hematuria. Under such circumstances, there would most likely be no particular set of symptoms referable to the urinary organs or passages, and it would be difficult to tell from whence the bleeding came.

If the bleeding proceeds from the bladder, there is usually pain on pressure over the pubis; great disturbance of the vesical functions; pain at the neck of the bladder before and after urinating; and undue frequency or difficulty of micturition. At first the urine is of normal color, or very slightly tinged with blood; while the last voided is frequently pure blood, more or less clotted; not diffused throughout the urine as in renal hemorrhage. When blood clots exist in the bladder, they impinge against the neck, and cause retention of urine; not so in renal hemorrhage. When the blood comes from the urethra, it may be pressed out in drops, or is pushed forward by the column of urine,

or is mingled in streaks with it. The pain is referable to the urethra alone; is circumscribed, of a burnining character, caused by the passage of urine over the abraded surface.

It is the opinion of the writer that a large majority of the cases of malarial hematuria reported through the medical journals are hematinuria, or false hematuria. In the general blood disorganization the hematosin transudes into the urinary canals, and becomes thoroughly diffused throughout the urine, imparting to it a sanguineous appearance, which may easily be mistaken for the discoloration produced by red blood-corpuscles. This view accords with my observations in the malarial districts of Arkansas and Louisiana. During the late war quite a number of cases of malarial cachexia presenting the "porter" or dark "port-wine" urine so characteristic of hematinuria came under my notice, which occurred among the Confederate troops under Gen. Dick Taylor, near Delhi and Monroe, La., during the month of July, 1863. This symptom was of frequent occurrence among soldiers suffering from intermittents and profound malarial cachexia; and was promptly relieved by large doses of quinine, with the iodide and muriated tincture of iron. In such a pathological condition there are usually no blood-corpuscles found in the urine, owing to the dissolved state of the blood always present.

The blood corpuscles are constantly undergoing decomposition in the body during the normal nutritive changes; hematin is set free, and after subsequent metamorphoses, is probably excreted in the form of urinary and biliary pigments, so that, in health, hematin never passes directly into the urine. But in profound malarial poisoning, in septic, pyemic, and putrid fever, frequently, excessive disintegration of the red blood discs takes place; the quantity of hematin thereby set free is too large to undergo the normal changes, and a portion of it is, therefore, excreted unchanged with the urine; or the hematin may un-

dergo pigmentation to a great extent, and find a free outlet with the urine. This latter view was held by the late Dr. J. Forsyth Meigs as the cause of the recurrence of intermittent fever, which is, however, only an hypothesis, and remains to be proven. High temperature in malarial diseases no doubt favors the transformation of hematin into pigments. In a large majority of the cases observed by me, the "porter" urine was more abundant during the paroxysms, and often subdivided when the paroxysms had ceased. These observations are corroborated by those of Prof. Hutchinson, of the Pennsylvania Hospital, who states in a clinical lecture on Malarial Cachexia, that, "It is not difficult to conceive that during paroxysms of intermittent fever, when the spleen is distended with blood, a destruction of the corpuscles, and a subsequent transformation of the hematin into pigment may readily take place, especially when a high temperature co-exists."—(*Med. News and Abstract, Aug. 1880, p. 449.*)

Enlargement of the spleen is always present and more or less marked in such cases. It is known that the spleen is the principal seat of the formation of this pigment, which, in its distribution throughout the body, as is shown in the skin discoloration, may be diverted to the uriniferous canals by the excessive engorgement of the organ during the paroxysms. This may account, in a measure, for the presence of a coloring matter in the urine resembling red blood globules, or hematosin. The miscroscope should settle this question. In most of the cases I have observed, of malarial hematuria, the spleen was enlarged, and the skin presented a dirty-yellow or ash-gray discoloration, while a few had pronounced jaundice. The most pronounced and persistent cases of hematuria occurring under my notice, were cases in which an "ague" had not occurred for many months to a year or more, but presenting features of malarial poisoning in a high degree of development. One case in particular is worthy of notice, Mr. S., æt. 22, had had, ague in the State of Illinois, for several years prior to com-

ing to Missouri in 1871. The chills ceased, though he was greatly debilitated; appetite variable; spleen greatly enlarged, and skin of an ashy color. In Dec. 1872, he was taken down with pneumonia in the inferior portion of the right lung, of a pronounced malarial type. The enlarged spleen troubled him greatly throughout the attack. On the 5th day the family became greatly alarmed by the appearance of bloody urine, and I was sent for in haste. The urine was uniformly red, but no distinct coagula formed. The hematuria subsided with the decline of temperature, under the use of large doses of quinine. The enlarged spleen had disappeared by the time the patient was able to engage in his farm work. In this instance the high temperature, 103° to 105° Fahr. (axilla), maintained for five days, in connection with the enlarged spleen, and malarial cachexia, induced the blood changes, resulting in hematuria.

The treatment of hematuria obviously depends upon the cause, degree and source of the hemorrhage. In malarial hematuria, when the bleeding is quite free, hemostatics may be employed to advantage, such as gallic, or tannic acid in 5 to 8 gr. doses frequently repeated. Dr. Golding Bird speaks highly of the acetate of lead, given frequently and in large doses for short periods. Sulphate of morphia in $\frac{1}{10}$ gr. doses every hour or two till eight or ten doses are taken will frequently arrest the bleeding, care being taken to keep the bowels open with saline cathartics. Ergotin 20 grs. to the ʒss. of distilled water or Squibb's fld. ext. of ergot in half-drachm to drachm doses, used hypodermically every thirty minutes till the bleeding ceases is a good remedy. The physician should not lose sight of the fact that the malarial element in the disease is the chief one to combat, and not rest his treatment upon the theory that the bleeding owes its causation to inflammation of the kidneys. The pathological condition of the kidney is not one of inflammation, active or passive, but of hyperemia produced by blood pressure from the portal system, which interferes with the nutrition of the organs, and consequently with their

functions. Free diuresis is desirable; but this is best produced by the free use of water, and not by the use of irritating diuretics, such as turpentine, etc.

Correct the pathological condition of the blood by toning up the sympathetic nerve centers. No remedy will more speedily and surely bring this about than sulphate of quinine in large doses, repeated often enough to maintain cinchonism, with iron and the iodide of potassium. Water, plain or combined with mucilaginous substances, is the only diuretic I have had occasion to use in treating a great number of cases during a service of four years as Confederate surgeon, and a ten years' residence in the malarial districts of White and Arkansas rivers, in Arkansas. Cure the malarial malady, and you can cure the hematuria. In connection with the hypodermic use of ergot, quinine may be used in the same way where the stomach is too irritable to retain the quinine in sufficient doses. I have combined iodide of ammonium in 5 gr. doses, and two to three drop doses of Fowler's solution with the quinine with the very best of results. I have never seen a case where cinchonism was maintained for several days that did not readily yield. I regard quinine as the sheet-anchor in the treatment of malarial hematuria.

SOME OBSERVATIONS IN OBSTETRICS.

By M. Yarnall, M. D., St. Louis.

In over one thousand deliveries I have had an inordinate proportion of obstetrical operations, amounting to more than one-third of the whole number. This experience was gained as the result of an early introduction to consulting practice among midwives, in which I was compelled to perform almost every operation known to midwifery. The relative, though not absolute number of deliveries requiring obstetrical operations was greater in my earlier than in my later practice.

These difficult cases influenced my earlier conception of midwifery, and my practice in that department of medicine. I naturally concluded that the proportional number of difficult cases was greater than it really is; and I took rather a somber view of midwifery.

The obstetrical forceps became my constant companion; I soon became not only familiar with their use, but infatuated with them. The admiration then formed still exists, ripened by time, but tempered by experience.

Podalic version had also occasionally to be performed, and the relative merits of version and forceps have often been presented to me, especially in certain deformities of the pelvis. This subject I discussed in a paper read before the St. Louis Obstetrical and Gynecological Society, and published in a late number of this journal.

Of the extremely difficult and dangerous cases requiring immediate delivery in order to save life, I have only one word to say. If the breech is not presenting, and the presenting part is at or above the superior strait, podalic version should always be performed in preference to trying to deliver with the forceps, for instance in cases of eclampsia, placenta previa, of occult hemorrhage etc. When the head is involved in the true pelvis, the forceps must be applied. However, my object is not to speak of extreme instances, but to call attention to the rules that guide me in ordinary cases of protracted labor, as relates to the use of the obstetrical forceps in these last.

The forceps are a harmless instrument in the hands of the skillful, and not only harmless but potent for good, by giving us a safe and certain means of shortening labor.

The first object of the accoucheur is to so aid his patient as to make the labor as rapid and as painless as is compatible with her perfect welfare. I conceive it to be his duty not to allow her to struggle on for hours in distress and anguish, to become exhausted, risking injury to her soft parts and producing fistula from long continued pressure, and consequent sloughing of the vaginal wall, or a ruptured perineum

caused by swelling and loss of elasticity, an accident I have witnessed more than once, and lastly, the death of the child which may occur if travail is lengthened; all these may be avoided by the timely use of forceps.

I do not wish to be understood as advocating interference in every case of labor. If all is progressing favorably, even if slowly, with no ontoward symptoms, I am contented, more so now than formerly, to allow the labor to terminate naturally; but should the patient be feverish and exhausted, or the labor unsatisfactory, and but slightly or not at all progressive, or should there be swelling of the soft parts of the mother, or a diminution or cessation of secretions, an extreme restlessness or an anxiety on her part for a rapid termination of the labor, or should the condition of the patient be such that I feel assured she would profit by an early delivery, I never hesitate, but suggest at once the propriety of delivery with instruments.

If I deem it not an important matter, I do not urge the use of the forceps, but as I have already stated, merely suggest it, informing the patient that she may be saved much agony, and leave the matter to be settled by her and hers.

If I think it would be decidedly beneficial to both mother and offspring, or to either, I then urge a speedy delivery. Should it be declined, the responsibility rests with them and not with me. It is rare indeed, under such circumstances, that the patient does not place herself entirely in my hands.

To deliver with the forceps, the os should be dilated or dilatable, and the head involved in the true pelvis, the lower down the better. The forceps only assists nature, and our women should be taught that it is not the formidable operation that they generally imagine, but only intended to assist their efforts, "long fingers" with which we may help them; that while in difficult cases of labor, great danger may exist in effecting a delivery, there is greater danger in not effecting it; that it is not the fault of the instruments, but of nature, that lives are sometimes lost. But it is not only that

we may save life with the forceps that we use them, but oftener that we may make protracted and painful, but not dangerous labors, short and comparatively easy. Our art consists in reducing suffering to the minimum.

The misapprehension in relation to the forceps unfortunately exists not only with patients but with the profession, and it is here that we must look to make an impression first. The use and abuse of the instrument are confounded. As midwifery becomes more of a specialty, prejudice will disappear, and the abuse, if such exist, will cease. When properly instructed, the practitioner will not apply them in an improper case; certainly never when nature is rapidly effecting a delivery. When the labor is slow and painful, if he uses them, he will hardly make a mistake.

Obstetricians who apply instruments skillfully use them often, and always have deserved reputations of being successful midwifes, while the prejudiced, timid, unskilled or ignorant practitioner who lets his patient suffer long, and will not call to his aid the instruments, such a practitioner neither deserves nor acquires credit. It is not too much to say that hostility to the use of the forceps in protracted labor, even if natural in other respects, ought to be thoroughly condemned.

In my own practice I prefer to apply the instruments without the use of an anesthetic, but in the great number of cases I am compelled to use it. I endeavor to apply the blade in relation to the sides of the head, and not to the sides of the pelvis. This, however, is not always practicable. Rotation occurs as I make traction. I let rotation direct me; I do not endeavor to direct rotation. If it is a primipara, I nearly always remove the instruments at the last moment, that is, when the face is about to sweep over the perineum, because I am well convinced that there is less danger of rupturing it. This precaution is unnecessary if the patient has borne children.

As to the amount of force necessary to be employed, I

use just enough to deliver, be that little or great; and if due care and gentleness are observed, neither the mother nor child will be injured, but benefited by concluding a labor that otherwise would be harassing and more or less injurious. Under no circumstances am I willing to see my patient suffer what I deem useless agony when I have so certain and so perfect a method of helping her.

When a patient has been delivered once with instruments, she almost always wants them again; and, I confess, I am always ready to gratify her wishes. Sometimes they do not give me time; they are delivered too soon. A distinguished obstetrician of this city once stated that he had only to show his forceps to some of his patients and they were at once delivered. They are truly wonderful instruments; they have done more good and received more abuse than any other that have ever been devised by man.

1601 Washington Avenue.

The London Lancet speaks of Prunus Virginiana as "the Virginian prune."

Hospital Saturday and Sunday in New York secured $41,000 for the various hospitals of that city.

The Physiological School for weak-minded and weak-bodied children, which was conducted by Dr. Edward Seguin in New York City, will be continued by his widow.

The Obstetrical Journal of Great Britain and Ireland ended its existence at the close of last year, for lack of support on the part of the profession. *The American Journal of Obstetrics* is one of the most successful and prosperous journals in this country or in the world.

CASES FROM PRACTICE.

TRAUMATIC ANEURISM OF THE RIGHT SUBCLAVIAN ARTERY CAUSED BY GUN-SHOT WOUND. TREATED BY MECHANICAL COMPRESSION.

By W. B. Lucas, M. D., Dalton, Mo.

[*Presented before the Moberly District Medical Association, October 5, 1880.*]

On the 5th of last May, at 6 o'clock, P. M., Julius Wilson, aged twenty-three years, while at home in his yard, near Dalton, was accidentally shot. The weapon used was a musket loaded with eight or nine large sized goose-shot. The muzzle of the gun when discharged was supposed to have been at a distance of ten feet. The shot passed just to the right of the manubrium, ranging outward and backward, wounding the subclavian artery, and brachial plexus of nerves and lodging in those structures.

The wound was a ragged one; measuring about an inch in diameter. Each shot had a separate entrance. Immediately after receiving the wound, he walked around the house and sat down, exclaiming, "I am killed." I did not see him until two hours later. The family told me that he became very faint, and they carried him into the house and laid him on the bed. All present supposed him dead. When I reached the scene, I found he had lost a large amount of red blood, but was not losing any at that time. It had been stopped by direct pressure. Pulsation in the radial artery was very feeble, and his body was covered with large drops of perspiration. I removed all the lint adhering to the external wound, and two shot; one that had lodged against the middle third of the clavicle, and the other from under the integument just beneath. There was entire paralysis of motion in the right arm and hand; his chief complaint, at first, was of pain in that arm and hand.

At 9 o'clock that night, a frightful hemorrhage again occurred, which I thought would soon end his life; but under the application of pressure, as in the first instance, it soon ceased. The compress, a folded towel, was left on the remainder of the night; the next morning it was removed. Considerable swelling existed around the wound, and ice was applied. Reaction was pretty thoroughly established, and he expressed himself as feeling very well. I saw him again on the 7th, he was still doing as well as could be expected under the circumstances. This improvement continued until the 14th, at which time I discharged him, although partial paralysis of that arm still existed. However, I did not anticipate any grave trouble from that, as it was rapidly recovering.

On the 7th of June, one month and two days after the wound was received, I was again summoned to his bedside. An examination revealed the fact that a large aneurism existed. The aneurismal thrill and bruit were well marked. It was an ovoid tumor situated in the intra-clavicular region, extending from the superior border of the clavicle downward, measuring in its long diameter three inches, and in its short diameter two and a half. It projected anteriorly above the level of the clavicle, and to the sense of touch, it seemed that every pulsation would cause a rupture of the wall of the sac. The night before he was awakened out of sleep, by hearing and feeling a tearing in the region of the wound, and at that time the tumor was found, or at least the greater part of it. A roaring in the head was his chief complaint, caused, I think, from the bruit being transmitted up the carotid artery to the brain.

Feeling that the case justified it, a consultation was asked, and Dr. J. P. Vaughn, of Glasgow, Mo., met me the next day. He had never seen just such a case, but with his valuable experience and matured judgment, was able to be of valuable assistance in such an emergency. Drs. T. A. Martin, of Dalton, G. M. Dewey, of Keytesville and L. R. Perkins, of Shannondale, saw the case during the course of treatment, and willingly lent their advice.

The case presented for our consideration was as above stated. To open the tissues and ligate the artery, seemed a dangerous procedure. On account of the relations the subclavian artery has with so many important vessels and nerves in the axilla,

and the danger involved in tying that artery, it was thought best to attempt some other procedure, and resort to ligation only as the last resort.

By pressing the finger down deeply, the subclavian artery can be compressed over the margin of the first rib; and when this was done the pulsation in the tumor subsided, showing conclusively that it was the subclavian artery which was wounded, and none of its branches, as those that pass near the wound are given off interior to the point where the compression was made. So the correctness of the original diagnosis was confirmed.

On June 10th we began compression. First, mechanical pressure was used, but afterward digital pressure was resorted to. The means tried were as follows: A small rubber ball, placed just above the clavicle, and pressed down onto the artery where it crosses the first rib, was fastened there by means of silk strips, wet and stuck down to the integument with elastic collodion. This did not answer the purpose very well, since the congestion, and pain produced by its application necessitated its removal every few minutes, and digital pressure was resorted to, which proved very efficient, but a tiresome task. The pressure caused a very painful condition of the arm and hand, and it could not be continued longer than fifteen minutes at a time during that day and night. The collateral vessels had not had time to accommodate themselves to the increased amount of work, and congestion of that arm and hand was the result. This was undoubtedly due to the pressure which the enlarged and distended vessels exerted upon the nerves. At the moment compression of the artery was omitted, all pain ceased. Pressure was continued at short intervals until June 17th, when the point where the pressure was made, became so inflamed that it was thought best to discontinue it for a few days.

On June 26th, everything seeming favorable, pressure was again resumed. The compress used this time was a cork covered with rubber, and held down by means of a *small truss*, which was applied as follows: The ball of the truss was placed over the compress, and the spring drawn over the shoulder and fastened down behind with strips of adhesive plaster. It proved to be a better means of producing pressure than any

other tried. It could be applied very easily, and did not require relays of assistants as did the digital pressure.

From this time until July 1st, the periods during which pressure was made, were gradually increased from twenty minutes to an hour, and also with increased frequency, the object being to continue it as soon as circumstances would permit.

On July 1st pressure was begun and continued almost uninterruptedly for ninety-six hours. The compression was not sufficient to entirely check the flow of blood through the tumor, but enough to stop the pulsation. At the expiration of the time above mentioned, on account of the tenderness of the skin, it was thought best to stop. Accordingly all compression was omitted. When the compression was first removed, the pulsation in the tumor had entirely ceased, but in the course of five or six hours it again appeared. It could be felt by placing the finger directly over it. Compression was not resorted to any more. This weak throbbing continued during the months of July and August. During the time compression was kept up paralysis of the arm and hand existed, but began to improve as soon as it was removed. He is able to use that arm and hand at present, almost as well as the other, and is at work on the farm as if he had never been wounded.

At no time in the history of the case was there any continuous febrile action. During the time while compression was being made, the pulse ranged from 80 to 120 per minute, usually highest in the afternoon. During the course of treatment his appetite was almost lost, and he became considerably emaciated; but as soon as the compression was omitted, he rapidly gained in weight and strength.

One point in this connection, I would like to urge, and it is to faithfully try compression in similar circumstances, and only resort to ligation when it becomes absolutely necessary. If an exhaustive trial of compression is made and fails, the case will still be just as favorable for ligation.

Dr. Timothy Holmes, of England, in one of his lectures on ligation of the subclavian artery, says: "Its dangers are no argument against its employment, if no safer means of treatment exist. But if we can point, as we undoubtedly can, to cases of the most unpromising character successfully treated without resort to so dangerous an operation, it becomes our

duty as surgeons to inquire under what conditions it is possible to treat axillary aneurism without operation; and when, on the contrary, we should feel justified in exposing our patients to all the dangers of the Hunterian ligature (or Anel's as the case may be); and, further, in what cases it may be justifiable to cut into the axilla and seek for the two ends of the artery, or remove the limb altogether.

"Notwithstanding the admitted fatality of the operation on the subclavian artery, whether we regard it as performed after the method of Anel, or after that of Hunter, I cannot discover that English surgeons have as yet made any serious attempt to treat aneurism of this artery by the milder method. Mr. Syme has, in fact, proposed to reverse the usual progress which practical science pursues, whether it be in surgical or other practice, by going back to the method of Antyllus. But in spite of the formal admissions which are to be found in the text-books, that pressure may be made available in this form of aneurism, how many of us have ever seen a persevering attempt made to carry it out?"

This accurately expresses our present knowledge of this question.

PELVIC ABSCESS.

By H. A. Smith, M. D., Swan Lake, Miss.

The patient, Mr. Gable, aged 59 years and 6 months, was a tall, spare man, of powerful constitution; an energetic farmer. Sometime in his past life he had contracted gonorrhea, which ended in a urethral stricture in outer portion of spongy part, for which, however, he had not had surgical assistance.

August 26, 1880, he took a trip with a wagon about fifteen miles, returning home on the 28th. He was much worried, and felt unwell, lying down part of the time only, until the evening of September 1st, when he went regularly to bed. On the 2d fever rose rather high; on the 3d he called in the nearest doctor, Dr. W——. I never learned what treatment he gave, except to bathe the patient in cold water.

The fever abated on the 4th and 5th, but arose higher again during the following night and morning, when Dr. W—— was sent for again. Some fever drops were administered and the

fever abated somewhat. From the 7th to the 10th he could walk across the room with some assistance, but there was considerable pain in the perineum during such attempts at locomotion. No local applications were made. September 10th he was obliged to stay in bed, and the next day it was observed that an abscess was pointing on the right side of the penis, about an inch from the belly, while the skin and fascia covering that side of the pubis were inflamed and swollen, pushing the organ strongly to the left. His suffering was very severe. September 18th I first saw the case. He was very much prostrated, suffering severely and unable to sleep. I administered opium, alteratives, and made warm applications locally. On the morning of the 20th I found him in about the same condition; could not quite make up my mind to lance that point, though no complaint had been made of the real starting point of the abscess, and I was not sure that a prostatic abscess could point up there. Anodynes and soporifics were continued, together with Epsom salts, enough to keep the bowels open and cool, also quinine, which is given as a matter of course in this malarial district.

On the 23d I opened the abscess freely, and about a quart, more or less, of very offensive pus escaped, I forcing the matter out by pressure on the perineum. I came back next day, and taking a common metallic female catheter, I passed it in to its full length, when I could feel the lower end through the rectum. I made a free opening in front of the anus, and ran an antiseptic wash through.

I paid him a visit every day after till the 30th, washing out the cavity carefully.

Oct. 3d—He seemed to be improving, and could turn in bed without assistance, which he could not do a few days before. But I noticed a red spot upon the abdomen, about four inches above the pubis, which fluctuated, and on opening it, I found I could run water through to the lower opening. I saw him again on the 6th, when I opened two other tracts, one on each side the last opening in the abdominal muscles, this making five points.

I saw him again on the 12th, when he seemed lively, stronger and hopeful. He was taken with cystitis on the night of the 12th, with retention of urine. He seemed to improve yet again, but died on the 19th, a mere skeleton.

A CASE OF TAPE-WORM.

BY B. T. WHITMORE, M. D., ST. LOUIS.

[*Reported before the Medico-Chirurgical Society.*]

J. R.—aged 25, entered medical ward of St. Louis Mullanphy Hospital March 3d. Complained of habitual constipation and ravenous appetite, with restlessness at night. Upon further examination, it was ascertained that about one year ago he had passed some small links of tape-worm, and two weeks later he applied to a physician in Illinois, where he was then living, for treatment. After being under the care of this physician for ten days, he passed, as he says, about forty feet of a tape-worm, after which he felt very much better.

About six months ago he commenced passing links of worms again. He again applied to a doctor for treatment, and after a few days he passed fifty feet of tape-worm.

For about four weeks previous to his entering the hospital, he had been passing links of tenia solium in about the same manner as on the two previous occasions, with the exception that on this latter occasion he has lost a great deal of flesh.

The patient was ordered no medicine for the first two days, and his nurse was directed to watch the evacuations from his bowels. After the patient had passed several links, he was ordered a large dose of castor oil, with direction to take no food for supper or breakfast. In the morning he was ordered an ounce of ol. terebinth. This treatment was followed by no good results. So, after waiting 24 hours, the castor oil was repeated, with directions to allow the patient no supper or breakfast, and the following morning he was ordered the following:

℞. Pumpkin seed, ℥ ij.; crush in ℥vj. of hot water; make an emulsion; add sugar ℥ij.; when cool add ethereal extract of male fern, ʒiss; croton oil, gtt. iv; sulphuric ether, ʒiij.

M. Shake vial.

S. Take one-third every fifteen minutes.

One hour and fifteen minutes after the patient had taken the first dose of the above medicine, he passed thirty feet of tape worm, since which time he improved gradually until he left the hospital on March 11th.

CHANCROIDS BY AUTO-INOCULATION WITH NON-SPECIFIC PUS.

By B. Bribach, M. D., Female Hospital, St. Louis.

The following case verifies, in a forcible manner, the assertion of Clerk, Baumler, Taylor and others, that true chancroids may originate *de novo*, in absence of the factor of a specific chancroidal pus.

Belle C—, aged 18, prostitute, was admitted to the syphilitic ward of the Female Hospital Nov. 1, 1880. She had noticed the first syphilitic eruption about a year previous, was in a low constitutional condition, and presented an asymmetrical, crustaceous eruption on trunk and lower extremities, numerous glazed rupia patches, syphilitic hypertrophy of the labia minora, and on the leg an ulcer, the result of a broken down gumma.

In February, 1881, her general condition was much improved; the eruption had healed, the labia were reduced to nearly the normal size, and the ulcer was fast improving. The right gland of Bartholini was found in a state of degeneration and was removed. During its enucleation a slight accidental incision happened to be made on the right nympha. While the lesion sequent to the removal of the gland rapidly got well, the slight traumatic injury showed no tendency to repair, and in a few weeks a perforation was established through the tissue of the labium, the surface of which secreted apparently healthy pus. The orifices of this opening were in contact with the left nympha and with the inner side of the right thigh respectively, and at these points pustules on a large, inflamed base were observed to form; first on the nympha, later on the thigh. These pustules, in a few days, changed to the familiar forms of typical chancroids. The sharp-cut edges of the circular sores, the peculiar grayish secretion and the abundant purulent discharge were so characteristic of their nature, that I deemed further inoculation to establish their identity superfluous. They yielded readily to treatment, leaving behind them the characteristic cicatrices following the destruction of mucous membrane and of cutis by chancroids.

EDITORIAL.

Vol. V. April, 1881. No. 4.

ANTISEPTIC TREATMENT.

The problem now seems to be to determine just how much of the elaborate dressing that is practiced and taught by Mr. Lister is essential to secure efficient antiseptic treatment of wounds made by the knife of the surgeon.

Prof. v. Bruns, of Tübingen, in a clinical lecture last October, declared himself as an opponent to the use of the spray He asserts that during the last two years he has gradually discontinued the use of the spray in operating, and during the last year has abandoned it altogether. Instead of the spray he makes use of irrigation with a carbolic solution of a strength of two per cent. or five per cent., repeated several times for a few seconds only during a long operation, or simply at the close of a short operation. He washes the whole wound at the close with a five per cent. solution, and in case of amputations, after the drainage tubes are introduced, he washes out the wound with the same solution when there is any evidence of bleeding. In dressing wounds after operation, he uses a two per cent. carbolic solution for irrigation. The antiseptic method of Lister is carefully observed in all particulars except this of the substitution of irrigation for the spray. He claims that the result of his experience warrants the conclusion: "The carbolic spray in surgical operations is not only useless and unnecessary, but also disagreeable and productive of interruption; it should therefore be abolished."

Another point upon which the Professor lays special stress is the changing of the dressing as seldom as possible. In amputations the first change of the dressing is not made until the eighth or twelfth day; and in some cases of resection the first dressing has been left undisturbed for thirty days.

The statistics which he gives are very favorable to his opinion, and compare well with those derived from the practice of those surgeons who employ the spray.

Dr. J. B. Wheeler, the Vienna correspondent of the *Boston Medical and Surgical Journal,* of January 20th, states that a similar modification of the antiseptic treatment is employed in the clinic of Prof. Billroth, simple irrigation with an antiseptic solution being used instead of spray. The utmost care is observed in excluding all possibility of infection. Carbolic solutions are used for the hands of the operator and assistants. The instruments, ligatures, sutures and needles lie in a carbolic solution, and the drainage tubes and sponges are kept carbolized. The dressings are like those of Mr. Lister.

Dr. Miculicz, who is Prof. Billroth's assistant, in a paper published in *Archiv. f. Klin. Chirurgie*, Bd. xxv., p. 707, explains the theory of their practice. He claims that the spray is an inefficient germicide, the concentration varying with the pressure, with the distance and with the form of nozzle, and the duration of contact of the vapor with the germs not being of sufficient length to destroy them, while the chemical action of the spray simply makes the surface of the wound slightly antiseptic. The irrigation, on the other hand, is made with a fluid which certainly carries no germs into the wound, which it is asserted that the spray sometimes does, and which is of definite strength sufficient to secure thorough destruction of any germs which may have fallen upon the surface of the wound during the few minutes that it has been exposed.

During the last three months of 1880, Prof. Billroth made nine ovariotomies without either spray or irrigation, with a perfect recovery in every case.

The *Boston Medical and Surgical Journal*, in an editorial of the same date, accepts the result of Profs. Bruns' and Billroth's experience so far as the practice relates to amputations, and all external operations; but regards the spray as still an essential part of the successful antiseptic treatment in ovariotomies, on the ground that irrigation in these cases would necessitate an amount of handling of the abdominal contents which would be likely to create peritoneal irritation or inflammation.

Further observation is necessary in order to substantiate the observations of Prof. Billroth; but so far as they go, the nine cases noted above as recently performed by him in the General Hospital of Vienna, without either spray or irrigation, would certainly suggest the possibility that the use of the spray is not a necessary element of success in ovariotomy.

At the same time the result of the experience of all these operators and writers, as well as that of the British ovariotomists, Spencer Wells, and Mr. Keith, and that of Dr. John Homans, of Boston, who reports twenty-five ovariotomies with two deaths during the year from November 26, 1879, to November 28, 1880, and the similar observations of surgeons in this country and Europe, all emphasize the value and importance of the antiseptic treatment and dressings in other particulars, even if the spray be dispensed with.

CINCHONA CULTURE.

Some years ago it became apparent that in order to meet the constantly increasing demand for quinine and other cinchona alkaloids, it would be necessary to have some other source of supply than that from which all the barks had been obtained, viz., the forests of Brazil, Peru and other South American States. Each year the *cascarilleros* were obliged to penetrate

farther and farther into the depths of the forests in order to procure the precious bark, as by their method of gathering the bark the trees were destroyed.

England, France and Holland, accordingly, established plantations of cinchona trees in different parts of their Indian possessions. The English plantations are among the Neilgherry hills of Bengal; and the result of the experiment is very satisfactory, the yield of bark having already become so great as to have a decided influence upon the price of quinine and the other alkaloids. The success of the government plantations has been so marked that other plantations have been undertaken by private individuals as profitable means of investment. Several million trees are now growing in the government plantations and those of private citizens; and large numbers are planted every year.

By the method of collecting the bark that is adopted upon these plantations, the tree is not destroyed. "A strip is taken off reaching the length of the trunk and one-third of its circumference. The wound is then dressed with straw-matting, and kept wet until the bark forms anew. The next year another strip is taken and so on indefinitely." The bark obtained in this manner from the cultivated trees is found to be richer in alkaloids than that from the wild growth in the South American forests.

The Dutch plantations in Java are quite as successful and profitable as are those of the English in Bengal.

So far as the United States are concerned, no experiments have been made as to the possibility of profitably establishing plantations of cinchona trees. It has been suggested by some, specially prominent among whom are the editors of the *Pacific Medical Journal* and of the *Medical and Surgical Reporter*, that there are parts of our country that offer favorable conditions for the culture of the cinchona tree. It is thought that some parts of California and Florida are specially well adapted for

this purpose, though it can only be determined by actual experiment. An editorial in the *Medical and Surgical Reporter*, February 19, states that Mr. Henry S. Wellcome, who has given much careful attention and observation to the subject, and has studied the cinchona tree thoroughly in its native forests, is of the opinion "that we could not find within the present limits of our country any spot combining the climatic conditions required."

It is certainly a question of sufficient importance to warrant Congress in making appropriations for the purpose of testing the question whether the cinchona can be successfully cultivated in any part of our country. At least slips of the cinchona tree might be distributed by the Agricultural Department, as are seeds of other new plants and vegetables, and thus, individuals being supplied with the slips, would soon be able to determine what localities, if any, are adapted to its culture.

An Excellent Movement.—There is an effort being made in the New York legislature for the establishment of incorporated institutions for pauper children, where they may be taught morally, as well as mentally, and be made self-supporting by learning some trade or handiwork; being retained until able to earn a livelihood for themselves. This mode of management would remove such children from the haunts of vice, idleness, ignorance and depravity, always abounding in cities, or towns, or in county poor-houses, and make them eventually well-trained and educated persons, contributors to the wellfare of the State and no longer consumers of the public fund. As pauperism is on the increase from business misfortunes and from immigration, as the poor must be always in every community, is this movement not the antidote for a poison which everywhere afflicts the body-politic? Is not the movement one which should be universal throughout the country? And should not doctors in State legislatures and out of them use their influence for the correction of evils and the removal of dangers which they, of all in every community best understand?—*Gaillard's Journal*, March, 1881.

BOOK REVIEWS AND NOTICES.

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis, etc. By Frank Clowes, D. Sc., London. From the third English Edition. *Philadelphia: Henry C. Lea's Son & Co.*. 372 pp., 12mo, cloth, $2.50.

There is certainly no lack of text books on chemical analysis in all its various branches, from the small students' guide to the voluminous and exhaustive standards. The number of treatises for students has lately had many additions, and yet we think that the present volume is calculated to fill a place not as yet fully occupied. There is in the work before us an appreciation of the difficulties the student invariably meets with, that shows at once the practical teacher, who observes and tries to remove the obstacles from the path of the pupil. Hence the minutest description of the conditions of success, so important in the practical work of the analyst, are not slighted but deemed worthy of careful explanation. The directions how to work, instead of being omitted as something too small for mention, are given in ample detail and sufficiently illustrated by cuts.

The *"tables of differences"* are conveniently arranged to enable an easy survey of the differential reactions of the members of each analytical group.

The general tables are equal to those in the best manuals and furnish some valuable facilities to both teacher and pupil.

Among the very few things to which objection might be raised, is the direction on page 130 to employ rubber connectors in the arsenic apparatus. It occurs now and then that rubber is imperfectly vulcanized with impure sulphur (possibly containing arsenic), and stains may be thus produced by some samples derived from the connectors and capable of misleading the unwary. It would be better to use the glass tubes entire, avoiding the otherwise convenient, flexible joints. But this is so small a point, that it does not detract from the general excellence of the work, which we strongly recommend to the favorable notice of our readers. C.

A Text-Book of the Physiological Chemistry of the Animal Body, including an account of the chemical changes occurring in disease. By Arthur Gamgee, M. D., F. R. S., etc. Vol. I. *London: Macmillan & Co.* 1880. 8vo., pp. xix, 487.

If any reader not a special student of the matters of which this volume treats would attentively study a single chapter of it, say that on the muscular tissues, it would surely set at rest in his mind the vague laments, so frequently expressed and embellished with all the flowers of rhetoric, over the limitations of our knowledge of the human frame. Or, at least, these indefinite sighs over our ignorance would take another shape: how many new questions are unlocked every day by all the details of knowledge added to our stock by the busy investigators of our age! The labor of Sisyphus seems repeated, only the stone each time runs farther down the hill; every achievement in science creates still greater tasks.

The book has not been written, however, to astonish the multitude, but "in the interest of the truly scientific student, anxious not merely to learn what has been already acquired to science, but wishful himself to extend her boundaries." Its divisions conform, in a general way, to divisions in physiology rather than in chemistry; it is not "systematic" in the sense of the chemical text-book, and evidently presupposes in the reader a not very limited acquaintance with organic chemistry. Yet every subject taken up is treated not only fundamentally, but exhaustively, including its chemical, physiological and pathological aspects, and the methods of research hitherto applied to it.

The present volume starts with a chapter on the proteid substances, entirely chemical, by way of introduction; then deals with the blood, and the changes which it undergoes in disease; the lymph and chyle, the so-called transudations, and pus; the group of the connective substances (connective tissue, adipose tissue, cartilage, and bone), together with the pathological changes of bone; the epithelial tissues; the nervous tissues; finally, the tissues of the ear and eye, including the recently developed chemistry of the retina. In all cases, histological data are supplied, sometimes exceeding in fullness the requirements of a professedly chemical treatise.

To a certain extent, the work is necessarily a collection of

the almost innumerable researches of the later decennia, scattered through the files of hundreds of scientific publications; but these labors are collected with great knowledge and system, in part verified, and duly criticised and appreciated. Thus the arduous labor of Prof. Gamgee has resulted in a work emphatically his own. Nor are these uncounted facts left altogether as bricks without mortar. for though the author does not write physiology, his material is held well together, partly by the introductory sections to each chapter, partly by skillful grouping.

The class to whom the book is addressed is small, as compared with the mass of the profession; nevertheless, every serious physician will find his account in perusing it. He who is still disposed to lament over our ignorance of the "blood in disease," instead of over the practical difficulties of the necessary researches and the limitations of the individual man's powers, is recommended to work himself through the thirty-eight pages on this subject; he will find there the quantitative variations of the principal constituents of the blood, including the determinations of the amount of hemoglobin[1] in the blood of various diseases, by QUINCKE; the changes in anemia, leucocythemia, scurvy, gout, rheumatism, in fevers, in cholera, in diseases of the heart, lungs, kidneys, in diabetes. The author knows nothing of lactic acid in rheumatism, which, moreover, is "clearly separated from gout by the *absence of an excess of uric acid in the blood.*" He describes the behavior of the corpuscles in leucocythemia and in "progressive pernicious anemia," the spirillum in relapsing fever, the bacillus of the splenic fever of cattle, and mentions more or less well founded observations on the presence of germs in the blood in other infectious and contagious diseases. The character of the transudations in dropsies, hydrocele, etc., is duly noticed; ten pages are devoted to the chemical features of pus; and the changes of bone in its diseases are recorded.

Finally, attention should be called to the very exhaustive chapter on the chemistry of muscle at rest and in action, in which the author follows very closely the admirable initiative labors of Prof. L. HERRMANN. G. B.

1 The estimation of hemoglobin in disease, at the bedside, has been made possible by Dr. Gower's apparatus, described on p. 184–6.

A Practical Treatise on the Medical and Surgical Uses of Electricity—Including Localized and General Faradization: Localized and Central Galvanization; Electrolysis and Galvano-Cautery. By Geo. M. Beard, A. M., M. D. Fellow of the New York Academy of Medicine, etc., and A. D. Rockwell, A. M., M. D., Electro-Therapeutist to the Woman's Hospital of the State of New York, etc., etc. Third Edition. Revised by A. D. Rockwell, M. D. With nearly 200 illustrations. New York. *Wm. Wood & Co.*, 1881. Octavo; pp. xxx. 758; cloth; $5.50.

This work has been before the profession just ten years, with increasing popularity and usefulness, as evidenced by the fact that a third edition has been demanded.

This edition differs from the second by having many additions without increase in size, accomplished by condensing, and by omitting portions here and there which had served their purpose, and were no longer of value. Two chapters on the sequelæ of Acute Diseases and on Exophthalmic Goitre, respectively, have been inserted. The chapter on Diseases of Women has been revised, and clinical additions made, and the complication of Extra-Uterine Pregnancy to Midwifery is fully considered. These, with many other changes and brief additions throughout the work, have, it is believed, materially enhanced its practical value.

It now becomes one of the most complete books on the subject published; treating fully not only of the application of electricity to the curing of both medical and surgical diseases, but also of the physics and physiology of electricity.

It might be objected that so much space is devoted to the consideration of electro-physics, which we were supposed to have familiarized ourselves with when we were at school or college, *i. e.* in our ante-professional days. But the strides of science are rapid, and unless we are frequently informed we soon become inefficient; and it were well, within the covers of one book, to have the whole subject complete for both study and reference.[1]

1 The more thoroughly one studies electro-therapeutics, in all its relations, medical and surgical, the clearer it becomes that the real scientific basis for the use of electricity in medicine and surgery is found in electro physics more than in electro-physiology, and for that reason it did not seem wise to very much abbreviate the portion of this work allotted to that department (*i. e.* electro-physics), p. vi. preface, 3d ed.

It was our authors who, soon after the war, brought out the subject of general faradization, then called general electrization, but since the discovery of central galvanization, made definite and distinctive from the latter. They have not, however, confined themselves to this method of employing electricity as a therapeutic agent, but in all the modes and in all diseases, they have been working and gaining experience, the results of which are here embodied and given to the profession. First, they treat of the different forms of electricity, the modes of production and the laws governing the same; then animal electricity and the effects of electricity on the different tissues and functions of the body; and finally the application of electricity to morbid conditions in general, and to special diseases as met with by the physician and surgeon. Cases from practice illustrating the mode of application and the results of treatment are fully given under the headings of the different diseases.

A description and pictorial illustration of the different forms of batteries are furnished. The experience of investigators, both at home and abroad, is presented; and, in short, the work is rendered as complete and minute as due regard to space will allow.

Many a practicing physician has been disappointed and disheartened in his therapeutic use of electricity.[1] But it, like any other therapeutic agent, has its place; it is not a cure-all, but must be studied and thoroughly mastered in all its laws and forms. A knowledge of disease too, is necessary that it may be known when and why to employ it. Then, too, patience and perseverance, in its application, are necessary. Proper care of apparatus and attention to minute detail are requisite if one would be a successful electro-therapeutist. It will not do merely to hold two sponges to a patient's body; more,

1 Many a student has purchased a fine microscope, devoted a few weeks study to it and its practical application, enthusiastically put it to use whenever opportunity offered; and in time been disappointed with its revelations, and allowed the dust to collect on it unmolested. Now the fault has been that the student was not grounded in microscopy—months instead of weeks should have been devoted to its study. It is this superficiality of investigation that brings disappointment to so many. And what is true of the microscope is likewise true of the battery and its uses, and for the same reasons.

much more, is requisite, and what more is well taught and emphasized in the book before us.[1]

In nervous diseases, as we would suppose, electro-therapeutics finds its chief application: hysteria, neurasthenia, cerebral and spinal congestion, neuralgia, cephalalgia, migraine, paralysis, spasmodic diseases, etc. A new field of usefulness has of late been opened in its use in dermatology: eczema, prurigo acne, herpes, elephantiasis, alopecia, and in the destruction of excessive hirsute growth (in which line one of the editors of the Courier, Dr. Hardaway, has done most excellent work.) In diseases of the organs of digestion, diseases of women and children, genito-urinary organs, larynx, eye, ear, in midwifery, exophthalmic goitre, sequelæ of acute diseases, as of diphtheria, etc. In surgery, in the form of electrolysis and the galvano-cautery; to remove benign and malignant tumors, aneurisms and varicose veins, strictures of the urethra and esophagus, ulcers, fistula and sinuses. In all these and many more afflictions, electricity has found beneficial application.

We would especially urge the younger members of the profession to master the subject of medical electricity, as one whereby much of success may be had in the treatment of disease, and to that end no better work can be studied than the one under review. A. J. S.

A Manual of Diseases of the Throat and Nose. By Franke Huntington Bosworth, A. M., M. D. *New York: Wm. Wood & Co. 1881.* 8vo. pp. 448. Cloth, $3.25.

The great increase during the past decade of physicians devoting their attention to specialties has been productive of a vast amount of special literature, good, indifferent and trashy. In this rapid age, the old notion that a book should be the crowning effort of a man's life, issued only after years of experience and study, seems to have been discarded, and all the specialists

1. There is a temptation to treat all cases alike by routine, mechanical applications, regardless either of the disease or the idiosyncrasies of the patient; hence, in cases not a few, come results either negatively, or temporarily injurious, with disappointment on all sides.

The dosage of electricity is a special study of the greatest practical importance; the difference in result between a very gentle and short application and a very strong and protracted one being in some cases all the difference between agreeable success and painful failure. P. vii., preface, 3d ed.

are rushing into print. Books are thus multiplied without number, and physicians are few who possess the purses or the time, necessary to possess or read them. This multiplicity of books is not, however, an unmixed evil. The production of his pen will often unmask the charlatan far better than public denunciation. Amongst the many books issued, few will find a permanent place in the libraries of busy physicians, but amongst those few, we venture to say, that the present manual on diseases of the throat, by Dr. Bosworth, will be found. It is essentially practical, and gives the experience of the writer during a period of ten years practice in one of the large New York Dispensaries. The first chapter is devoted to instruments and their use. We are glad to see that the writer repudiates the idea that a multiplicity of instruments, and a cumbersome illuminating apparatus are essential to the practice of laryngoscopy. This false idea has done much to prevent the practice of this branch of medicine amongst general practitioners.

In his classification of diseases, we find a special good feature in the elimination of many obscure terms as "chronic sore throat," etc., and his chapter on subacute laryngitis will be appreciated by laryngologists, as bringing into prominence one of the most common and tractable diseases of the throat.

We are sorry to see that the author still retains the word "catarrh," as illustrative of divers conditions. Atrophic or dry catarrh, is certainly a misnomer; and hypertrophic nasal catarrh could certainly have been better expressed. The pathological condition should be expressed in the name rather than one of the results.

The chapters on the diseases of the larynx are well written and practical, and those on the neuroses of the larynx are especially valuable. We are surprised that in the treatment of malignant growths of the larynx, mention is made of tracheotomy, simply as a means of removing obstructions of the air passages, whilst its use as a therapeutic measure resulting in a retardation of the disease, and as a substitute for extirpation, is not noticed.

The chapter on extirpation of the larynx, gives an historical review of this operation from its inception by Czerny, to the present time.

An appendix contains a number of formulæ which will be appreciated by those in busy practice.

In regard to that important subject, treatment, the author is thoroughly practical, he does not in a general way recommend a number of drugs for certain conditions, but states simply what has given the best results in his hands. Although exception may be taken to some of his advice, still, on the whole, the treatment laid down will meet with the approval of competent men.

The illustrations in this book are many and good—it would have served appearances however, to have omitted the oft repeated names of the instrument makers and dealers.

We venture to believe that this book of Dr. Bosworth will be popular with the general profession as presenting in a condensed form the present theory and practice of throat diseases, and every one pretending to treat diseases of the throat should possess it. W. C. G.

A Practical Treatise on the Diseases of Women. By T. Gallard Thomas, M. D., etc., etc. Fifth edition enlarged and thoroughly revised. Containing two hundred and fifty-six engravings on wood. *Philadelphia: Henry C. Lea's Son & Co.* 1880. 8vo., pp. 806, cloth, $5.00; sheep, $6.00; half Russia, $6.50. (Through the Hugh R. Hildreth Printing Co.)

One of the most noteworthy facts in the history of medicine of late years has been the remarkable development of certain specialties. No department has made more rapid progress or has commanded more general attention and interest than that which pertains to the diseases peculiar to woman.

It is twelve years since Dr. Thomas offered to the profession the first edition of his work upon the "Diseases of Women," and gynecology was then just beginning to be recognized as a special department of practice. The book was received as the work of a master, and as the successive editions have been published from time to time, embodying the results of matured experience and extensive practice, it has been generally acknowledged that this was the best work upon the subject. Translations into German, French, Italian and Spanish indicate the European reputation that the work has secured.

This fifth edition has been carefully revised throughout, and several new chapters have been added, among which we notice one on "General Considerations upon Uterine Pathology and Treatment," one on "Congenital and Infantile Malformations of the Female Sexual Organs;" also, chapters entitled "Uter-

ine Fungosities," "Laceration of the Cervix Uteri," "Oöphorectomy" and "Extra-uterine Pregnancy."

It is impossible to undertake a systematic analysis, even of the new matter, nor is it needed. We can merely call attention to a few points of interest.

With reference to uterine pathology, which has been a subject of such bitter contention among prominent writers for many years, he takes a position which seems to us to be the only one that can be successfully maintained. After reciting several of the conditions which by different writers have been put forward as *the* moving cause of uterine disorders, he says:

"To one who calmly and dispassionately considers the subject, not in the study, but by the bedside, and who goes to it with a mind free from prejudice, and eager for the discovery of truth, it appears to me that it must in time become evident that truth lies not in any *one* of these theories, but is to be found to a certain extent in each. No pathologist claims that hepatic, or cardiac, or renal disease has always the same pathological origin; why should anyone expect to find for uterine disorders a universal pathogenic factor?"

The chapter on Laceration of the Cervix Uteri is one that is of special interest now, in view of the important results that have been obtained by Dr. Emmet and others from the operation to restore the injured organ. Dr. Thomas gives full credit to Dr. Emmet for the valuable service he has rendered the profession in showing the importance of the lesion and supplying an efficient method of treatment.

The chapter on Oöphorectomy is a brief summary of the history, indications and results of this operation with his estimate of its value, in which he coincides very closely with that advanced by Dr. Engelmann in his paper on Battey's operation, read before the American Medical Association in 1878.

The parts of the work in which Dr. Thomas himself takes the greatest interest are that in which he treats of the mechanical appliances for the treatment of flexions of the uterus, and that relating to the anatomy, physiology and pathology of the perineum. Several most ingenious appliances for the treatment of displacements and flexions, especially the ante-flexions, are the result of Dr. Thomas's ingenuity, while he notes also some of the appliances of other practitioners which he has found of service. Among these, he mentions the pessary of our fellow-citizen, Dr. E. C. Gehrung, though the name is incorrectly spelled Guerung.

E. M. N.

Minor Surgical Gynecology. A Manual of Uterine Diagnosis and the lesser Technicalities of Gynecological Practice for the use of the advanced student and general practitioner. By Paul F. Munde, M. D., Professor of Gynecology in Dartmouth Medical College, etc., etc., etc., with three hundred illustrations. *New York: Wm. Wood & Company.* (Wood's Library of Standard Medical Authors.)

That "success in the treatment of the diseases of women lies wholly in attention to minute details," is the cause of, and the great value of, this work, and the virtue of Dr. Mundé's book is that these "minute details" are explicitly given. Nearly one-third of the volume is occupied with directions as to the methods of examination. Commencing with verbal interrogatories, particular stress being laid upon the localization, causes and significance of pain, the author has neglected no point of instruction as to the methods and means of arriving at a thorough knowledge of the conditions of the intra-pelvic organs, first by non-instrumental methods, viz: inspection, auscultation, percussion, palpation, and digital touch; secondly, by instrumental methods, under which heading we find cuts innumerable of tables, chairs, and instruments of every variety, many of which, we submit, might have been advantageously omitted.

The instruction upon the uses of sound and probe are eminently valuable, and may be profitably studied by many who are in the daily habit of using these essential instruments. The attempt at replacement or testing of mobility with the sound is justly condemned.

Part II., treats of manipulations and applications. Commencing with directions for catheterization, the simplest method by which the novice may introduce the catheter is not given; the touch which has learned to recognize the meatus has been much educated, and before this can be reached by very many practitioners, they will have many occasions to practice this essential manœuvre—the finger in the vagina will easily detect the urethra, prominent in its course beneath the symphysis, and as it rests there the catheter may be slipped along the volar surface until arrested at the pubis; it should be then moved upward for half an inch across the vestibule, then reversing the movement, unless the parts are very much distorted, the point will easily pass into the urethra.

Dilatation of the urethra and injections into the bladder are briefly described, after which we have copious treatment of the

application of medicinal agents to the vagina and cervix, including very full and minute instruction as to the mode of using most of the stronger agents, as cauteries, escharotics, etc., giving various formulæ, with all the necessary precaution as to the management of this class of remedies.

The tampon, its uses and mode of using for different purposes, is fully taught with the utmost particularity of description. "Applications to the Endometrium" includes the description and cuts of all conceivable instruments devised for the purpose; the indications for different medicines, and how to use them. Intra-uterine injections are not commended. Section VII. of this part is devoted to the discussion of the methods for dilating the uterus with and without cutting instruments. Under this head we have the varieties of tents, mechanical contrivances for immediate dilatation, and finally detailed demonstrations of the operations with cutting instruments for the various deformities resulting in obstruction to ingress or egress of fluids to or from the uterine cavity. "Curetting" and "Local Depletion" are followed by a few notes on the injection of medicinal substances into the tissue of the cervix and vagina, but the author's experience has not been such as to encourage him to recommend them.

Reposition of the displaced uterus and ovaries occupies seventy-six pages, and may be most profitably studied by the general practitioner who considers malposition as the *fons et origo* of all uterine ills and flies to a pessary for certain help.

Artificial impregnation, massage and the method of hypodermic injection of ergot receive brief attention at the close of the volume, which is concluded by a list of the instruments essential to enable the practitioner to examine into and treat the ordinary diseases of women.

Taken as as whole, we think Dr. Mundé deserves congratulation as well as commendation for the manner in which he has presented his subject. It is a matter of regret that the operations for perineal and cervical lacerations have not received his attention. At any rate, the immediate treatment of these conditions might have been considered as minor gynecological surgery, but where there is so much good it would be a most ungracious task to criticise. The mechanical execution is often poor, many of the wood-cuts very bad, and all coarse, which

we suppose is a necessary fault with cheap editions; but the Standard Library aspires to and is taking a position which deserves better material and more careful attention in proof reading. G. A. M.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M. D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania; Dermatologist in the Philadelphia Hospital; Consulting Physician to the Dispensary for Skin Diseases, Philadelphia. Author of "Atlas of Skin Diseases," etc. Second edition. Revised and enlarged. Philadelphia. *J. B. Lippincott & Co. 1881.*

Dr. Duhring's treatise on diseases of the skin became a standard authority almost from the day of its publication. Although it first appeared as recently as 1876, and is but now in a second edition, the stamp of unqualified approval has been fully accorded, and the work stands forth to day as a medical classic.

There is no sort of question that with the exception of Hebra's and Kaposi's encyclopedic volumes, this is the best work on dermatology, not only in English, but in any other language. In making such a broad statement, we are not unmindful of the merits of Neumann's fine hand-book, nor of Kaposi's recent excellent treatise, nor of the late Tilbury Fox's painstaking labors. But Duhring represents exclusively neither English thought nor German thought. The practical is not sacrificed to the scientific, nor the scientific to the practical. In one word, it stands for American dermatology, which is synonymous with the most liberal eclecticism. Of course without an American school of dermatology, such success would not have been possible, and it is a matter of no little national pride, in looking through the pages before us to note the many valuable contributions from our native writers. It is a note-worthy fact that the present contains almost twice the number of additions from this source that was to be found in the first edition. This is largely due to the nurturing care of the American Dermatological Association which has developed an active body of earnest workers in the past few years. Through its influence, in fact, has arisen an American school of cutaneous medicine, a school, as we have just observed, which is essentially eclectic in its methods. Dr. Duhring's present edition has been re-cast, re-written and materially enlarged, but

without apparent increase in the bulk of the volume. Besides an unusually rapid sale for a work of this sort, which necessitated a revision, the demands of this now, very active specialty would have left a book published in 1876 almost obsolete. The material additions are to be found in the sections on the anatomy and physiology of the skin, including new illustrations drawn by Van Harlingen, and in entirely new sections devoted to uridrosis, phosphorescent sweat, urticaria pigmentosa, dermatitis circumscripta herpetiformis, impetigo herpetiformis, pityriasis maculata et circinata, dermatitis exfoliativa, dermatitis medicamentosa, dermatitis gangrenosa, dermatitis papillaris capillitis, fungoid neoplasmata, tuberculosis cutis, podelcoma, perforating ulcer of the foot, ainhum, and myoma cutis.

W. A. H.

A Treatise on the Practice of Medicine for the Use of Students and Practitioners. By Roberts Bartholow, M. A., M. D., etc., etc. *New York: D. Appleton & Company.* 1880. 8vo., pp. 853. Cloth. (Through the Hugh R. Hildreth Printing Company.)

All who have read and used Dr. Bartholow's treatise on Materia Medica and Therapeutics were ready to give a cordial welcome to a volume on the practice of medicine by the same author.

The book is of less size than we had expected to see when the announcement was made that Dr. Bartholow would prepare a work on the Practice of Medicine; but it is remarkable for the thorough condensation that characterizes it throughout. One of the great blemishes of medical literature generally has been the intolerable diffuseness of most medical writers. Comparatively few of our ablest lecturers have mastered the art of expressing themselves at once tersely and distinctly. Dr. Bartholow's style is very excellent in this respect; and while his mode of expression is somewhat dogmatic at times, the book is a pleasant one to read.

In his preface the author avows himself an opponent of the prevailing therapeutical nihilism of the age. He not only has faith in the efficacy of medicine, but he gives clearly and unhesitatingly his ground for the faith that is in him. At the same time his teaching is not such as to lead to reckless or excessive dosing; for the limits of their utility are noted, as well as the indications for the use of remedies.

This volume will be of great value and assistance both to students and practitioners; but it is hardly the book that will enable them to dispense with all others upon the practice of medicine. N.

Yellow Fever—Its Ship Origin and Prevention. By Robert B. Hargis, M. D. *D. G. Brinton, Publisher.* Philadelphia. 8vo., pp. 80. Cloth, $1.00. (Through the Hugh R. Hildreth Printing Company.)

This little volume on Yellow Fever is a reprint of three articles which appeared last year in medical journals. They constitute an able presentation of the view that this fever is of ship origin, and form a valuable contribution to the study of this subject, whether the conclusions of the author are accepted or not. We think that most physicians will probably *not* agree with the author.

"Wood's Ophthalmic Test Types, and Color Blindness Tests" consist of one card containing two series of parallel lines, for testing for astigmatism, attributed to Wecker, actually borrowed from Green (Trans. Am. Oph'l Soc'y, 1867); two cards of Jaeger's[1] test types; three cards of Snellen's[2] test types; one card from Snellen[3] for testing for astigmatism; one of Green's[4] dials for testing for astigmatism, and two figures apparently to be used with the dial; one of Prof. Holmgren's "*Confusion Plates*," "to illustrate the mistakes of the color blind, not for testing color blindness;" a collection of colored worsteds for testing for color blindness; two pamphlets, one by G. R. Cutter, M. D., "*Explanatory Text to Wood's Ophthalmic Test Types* and *Color Blindness Tests*," the other by Henry Noyes, M. D., "*How to Choose Glasses;*" eight trial glasses for testing refraction; a

1 These types but roughly correspond with Jaeger's (Staar und Staar Operation Wien, 1854.)

2 "Optotypi ad Visum Determinandum," Utrecht, 1875. The letters and characters on plates 1 and 2 are needlessly obscured by coarsely engraved construction lines.

3 Wrongly attributed to Wecker, actually adopted by Snellen ("Optotypi ad Visum Determinandum," Utrecht, 1875) from Green (Am. Journal Medical Sciences, 1867.)

4 Taken without the knowledge, and altered in a manner not approved by its author.

monocular hand-frame for holding the trial-glasses, and a metallic disc with a stenopaic slit.[1]

The test types, with the exceptions noted, are well printed, and the tests for astigmatism are well enough as far as they go.

The hand-frame for holding the trial-glasses is very objectionable. Test glasses should be mounted in suitable frames, and should always be used in a binocular spectacle frame; for a description of the manner of mounting to be used in combination, consult Green in Trans. Am. Oph'l Soc'y, 1878 and 1880.

Dr. Noyes' pamphlet, and Dr. Cutter's pamphlet, which is designed to be a guide to the use of the trial-glasses, speak only of dioptries and English inches as units of measure. As nearly as we have been able to make out, the unit of measure in the glasses furnished is a French foot, and even then they are ground inaccurately, +1 having a focal distance of 13½ English inches, and +0.5 having a focal distance of 8 English inches and so on through the series. Aside from these serious defects of discordant and unprecedented marking, and inaccuracy in grinding, the glasses have no frames, and show careless and poor workmanship.

The pamphlet by Dr. Noyes is of course good; but we notice that he thinks cases of strabismus should be operated on before glasses are used. In this we differ with him, as it has been our good fortune to see a number of cases become straight, after proper glasses had been worn for a time, without any operation, and in other cases the preliminary use of glasses has rendered important aid in determining the degree of correction to be sought by operation.

Dr. Cutter's pamphlet is interesting and well repays reading. We are, however, surprised that he states that it is usually necessary to paralyze accommodation before measuring for astigmatism. The most satisfactory results which have come under our observation have been those which have been obtained with the accommodation undisturbed. We are also surprised that he speaks of total hypermetropia as absolute hypermetropia, absolute hypermetropia, being quite different from what he defines it to be. The most interesting, and the best

1 Pray's sheet of test letters for astigmatism, as published about twelve years ago by Messrs. Wm. Wood & Co., affords a very convenient and striking test, which might well have been included in this collection.

portion of the pamphlet, is that which treats of the theory of color blindness, and is based on the classical color theory of Young, to whom he ascribes it.[1]

In regard to the "Tests" in the form in which they are presented, we can neither endorse nor recommend them; the whole paraphernalia seem to belong to the short cuts to wisdom.

If these tests are to be scattered over the country, soon every doctor, who is inclined to be a dabster, will regard himself as an expert in dioptrics, and an authority upon color blindness, and this to the certain detriment of his patients.

Dioptrics is the most difficult branch of a difficult specialty, and a general practitioner, armed with eight poorly made and inaccurately marked trial glasses, will be in no position to give opinions or make diagnoses in it.

> "A little learning is a dangerous thing;
> Drink deep or taste not the Pierian Spring."

M. H. P.

1 Bakerian Lecture, Philosophical Transactions, 1801.

BOOKS AND PAMPHLETS RECEIVED.

Annual Announcement of the Medical College of the Pacific. San Francisco, 1881.

Is Secondary Syphilis Communicable as Such. By G. M. B. Maughs, M. D. 8vo. pp. 20, paper.

An Improved Self-Retaining Speculum. By A. F. Erich, M. D., etc. Reprint from the *Obstetric Gazette.*

Transactions of The American Medical Association. Vol. xxxi. Philadelphia, 1880. 8 vo. pp. 1153, 131; cloth.

Anemia in Infancy and Childhood. By A. Jacobi, M. D., etc. Reprint from the *Archives of Medicine*, Feb. 1881.

The Cardiac Nerves. Tabulated by Roswell Park, A. M., M. D., etc. Reprint from the *Annals of Anatomy and Surgery.*

Hemiopia. Mechanism of its causation etc. By Wm. Dickinson, M. D. St. Louis. Reprint from the *Alienist and Neurologist.*

Transactions of the Eleventh Annual Session of the Medical Society of Virginia, held in Danville, Oct., 19-21. 1880.

The State Public School at Cold Water—Its Purposes and Aims. An Address by L. P. Alden, Superintendent. April 22, 1876.

The Heart and its Function. Health Primers. New York. *D. Appleton & Company*, 1881. Square 16 mo. pp. 95. Cloth, 40 cents.

A Conspectus of Three Different Forms of Cardiac Disease. By Roswell Park, A. M., M. D., etc. Reprint from the *Southern Clinic.*

Education Versus Heredity. By L. P. Alden, Superintendent of State Public School, at Cold Water, Mich. *Lansing: W. S. George & Co.* 1880.

Remarks on Syphilis. By Walter Coles, M. D., St. Louis. Reprint from the Transactions of the St. Louis Medical Society in *St. Louis Med. Jour.,* Jan., 1880.

Colorado and Invalids. By S. Edwin Solly, M. R. C. S., Eng., etc., etc. Reprinted from "New Colorado and the Santa Fe Trail." Colorado Springs, Col.

Seventh Annual Report of the Board of Control of the State Public School for Dependent Children. *Lansing, Mich.: W. S. George & Co.*

Proceedings of the Louisiana State Medical Association at its Third Meeting, held in the City of New Orleans. 1880. *New Orleans: J. S. Rives.*

Syphilis and Marriage. By Alfred Fournier. Translated by P. Albert Morrow, M. D., etc. New York. *D. Appleton & Company*, 1881. 8 vo. pp. 251. Cloth, $2.00.

Extirpation of Rectum Without Destroying the Sphincter Ani Muscle. By William A. Byrd, M. D., of Quincy, Ill. Reported from the *Medical and Surgical Reporter*, Dec. 11, 1880.

Laparotomy and Colotomy, With Formation of Artificial Anus for Obstruction of Intestines. By Wm. A. Byrd, M. D. Extracted from the Transactions of the *American Medical Association.*

Investigation by the Commissioners on Charitable Institutions of the City of St. Louis, Relative to the Management of the Insane Asylum. *St. Louis: Tedford & Hartnett.* 1880.

Extensive Scalding From Prolonged Exposure to Steam at High Temperature. By Norman H. Chapman, M. D., A. M., etc. Reprinted from the *Am. Jour. of Medical Sciences*, Jan., 1881.

The Relations of Goitre to Pregnancy and Derangements of the Generative Organs of Women. By Edward W. Jenks, M. D. LL. D., Chicago, Ills. Reprinted from *Am. Jour. of Obstetrics.*

The Suffocation of Infants by Overlying in the night has recently been investigated by a London coroner, who found that the abuse of alcohol was the principal cause of this form of mortality. Most of the cases occur on Saturday night following the weekly debauch of the poorer classes among which they happen. The mother goes to bed in a state of semi-intoxication, nurses the baby with alcohol-poisoned milk, and both sink into a sort of drunken stupor of which the infant becomes the victim.—*Pop. Sci. Monthly*, March, 1881.

Science for the Young—The *Philadelphia Medical Times* has found some choice reading in a small manual used for children of eleven or twelve years old in the schools of Manchester, England. In one of them "the author explains scientifically the things of common life. Youths of twelve are quite ignorant of what jumping means. He tells them, 'jumping' or leaping is effected (1.) by the sudden contraction of the muscles of the calf, by which the heels are suddenly raised and the body jerked off the ground; (2.) by the simultaneous contraction of muscles which bend the thigh upon the pelvis; (3.) by the sudden extension of the legs by the contraction of extensor muscles, this movement following immediately on the two movements first described.'" Should this be called condensed milk for babes?

TRANSLATIONS.

EXTIRPATION OF A TUMOR (LIPOMA EDEMATOSUM MYXOMATODES) OF THE MESENTERY, WITH EXSECTION OF THE SMALL INTESTINE.

By Prof. Madelung, Bonn.

October 14, 1889, Mrs. H——, aged 31, entered the surgical clinic at Bonn. She was of medium size, extremely emaciated, yellowish complexion; edema of the lower extremities; the abdomen was greatly distended. An abdominal tumor was found extending from the symphysis pubis to the diaphragm, which was pressed high up into the thorax. When the patient lay upon her side the tumor sank a little towards that side. The intestines lay altogether behind it. Percussion sound over the tumor, flat; upon palpation distinct fluctuation over the whole extent; no pain upon palpation except in left hypochondrium. Surface of tumor, smooth. Uterus depressed.

The patient suffered greatly, she could not sit erect in bed, had no desire for food; nausea, unquiet sleep. She complained that everything had a fecal odor.

Diagnosis was made of a proliferating ovarian cyst, with lax adhesions.

October 25th, operated under the spray. Incision was made in the median line, and after the escape of a little ascitic liquid, the tumor came in sight, having all the appearance of an ovarian cyst. Numerous adhesions with the peritoneum below the navel were readily broken up, but in the region of the navel and higher they were firmer and required ligation. Upon two punctures no liquid escaped. Introducing the finger through an opening thus made, it was found that the tumor was composed of solid matter of fragile character. The tumor was now freed from its adhesions with the omentum. These attachments were extensive and the omentum contained numerous dilated veins. With considerable difficulty the upper part of the mass

was drawn out of the abdomen, partly exposing its posterior surface. At this point further extraction was hindered, as from its basis there sprung, attached by a pedicle almost as thick as an arm, another tumor, globular in shape, and of the size of a child's head, which was held down by a loop of the small intestine that passed over the pedicle and was united with it. This bit of gut was empty, and being upon the stretch, looked like a flat band of the width of the little finger.

We now abandoned further operation upon the basis, and proceeded to liberate the lateral portions, which occupied considerable time on account of numerous adhesions. The traction upon the basis of the tumor while thus operating had been too great, as it was subsequently discovered that the loop of gut over the above mentioned pedicle had suffered a longitudinal rupture, about four centimetres in length; no feces had escaped; on the mucous surface there was a yellowish, glairy coating. On account of the very irregular character of the rupture it was evident that the wound could not be closed with sutures, and that exsection of a portion of the gut would be necessary. Ligatures were applied as a temporary measure and the injured part cut out. This measured in length about eight centimetres. After the small intestine, for a short distance up and down, had been separated from its mesentery, and at the same time from the tumor, this with its globular attachment was raised entirely out of the abdomen.

Now inspecting the abdominal cavity, it was plain that the tumor had been completely extirpated. The bleeding from several of the adhesions was checked and the general cavity cleansed. The cut ends of gut were drawn again into view, and under due precautions and continual use of the spray, their union was effected after the the Jobert-Ramdohr method of invagination, about three centimetres of one end was thus introduced into the other. The walls were stitched with fine sutures; in addition, other superficial sutures were placed in the serous surfaces. The sutures, as well as all intra-abdominal ligatures, were of cat-gut. After the gut was allowed to fall back into the abdomen it was immediately withdrawn under the convolutions and disappeared, demonstrating that the part operated upon must be near the duodenum. The peritoneal edges of the abdominal wound were brought together with cat-

gut sutures, the skin and muscles with silk. Carbolic compress and body bandage finished the dressing.

The whole operation lasted about two hours. Upon recovery from the anesthesia, the pulse was stronger than before the narcosis; the patient felt in general well. An hour after the termination of the operation, pulse 92, temp.,36.9° C. In the evening, after steady increase of the temp., 37.2°, there was nausea, and a few times mucus was vomited. Only during the act of vomiting was pain felt in the abdomen. Tinct. opii gtt. xx, was twice administered during the afternoon, and ice pellets. October 26, A. M., temp., 37°, general condition good, continuation of the nausea, several attacks of vomiting, with raising of mucus tinged with bile. Urine drawn by catheter, brown but towards evening of normal color. 7 P. M., highest temp., 38.6°, pulse 102. Morphia was this day given three times sub-cutaneously.

On the following days the general condition remained very good; occasionally only was there a feeling of weakness; vomiting lasted four days, when it did not occur for some time.

October 27, flatus passed and on the 30th, for the first time, liquid feces, with a few solid masses. From the 27th, cognac was given hourly in 3 doses. On the 27th and 28th, small injections of broth and yolk of eggs were several times given; injections of peptones were then substituted.

On the 31st the bandage was removed for the first time. With the exception of a small spot the wound had healed. Ten sutures were removed and a fresh bandage with salicylic dressing applied. From this day on, raw eggs and beef tea, with leguminose were given by the mouth. November 6th the remaining sutures in the abdominal wall were taken away, and the compress omitted. On the 10th, the patient having gradually increased the strength of her diet, now eating meat in moderate amount, felt, an hour after a meal, quite sharp pain in the abdomen; temp., 39.1°. For several days since the disuse of the compress bandages, there had been tympanitis, and vigorous peristalsis of the intestines could be observed through the abdominal walls.

It was plain that the symptoms proceeded from the accumulation of solid feces above the intestinal stenosis, caused partly by the intestinal sutures and invagination, partly by the long

existing intestinal compression, as well as by the inflation of the guts which were not sufficiently supported by the weak abdominal walls. Morphia was given sub-cutaneously and the compress reapplied. The symptoms disappeared, and on the next day the general condition was good, with no fever.

November 13 the patient left the bed for the first time. From this time on she continued to improve, with occasional repetition of the last described symptoms of intestinal obstruction upon too free use of solid diet and omission of sufficient compression. These attacks, however, were promptly and easily met as described above.

December 11 she was allowed to return home. At this time the only complaint was about difficult defecation. Careful examination through the greatly relaxed abdominal walls failed to discover any part of the intestine with abnormal thickness of its walls. We have every reason to believe that with due precautions as to diet, the colic caused by the stenosis will gradually disappear.

The tumor weighed 35 pounds, nearly one-third the entire weight of the patient herself before the operation. The globular appendix, with its attending pedicle (with which the gut was united), consisted of pure fatty tissue. Another appendicular part was of doughy consistency and resembled a bladder filled with gelatine. The chief mass seemed to be composed of materials in irregular combination. Owing to the escape of edematous water the tumor lost in the course of a few days one-fourth of its weight and volume. The entire mass, with the exception of that portion from which the mesentery and gut had been dissected, was covered with peritoneum as a capsule.—*Berlin, Klin. Woch, No.* 6 and 7.

TRANSFUSION OF BLOOD TAKEN FROM A HUMAN BEING AFFLICTED WITH HYDROPHOBIA, INTO THE VEINS OF DOGS.

F. Lussana, of Padua, in Italy, drew blood from a hydrophobic patient by means of a cupping glass applied over leech bites, filtered it and injected the filtrate into the femoral veins of two dogs. Dog No. 1, exhibited after the lapse of 24 hours an ab-

normal behavior; he became quiet, apathetic, and died on the 26th day. At the post-mortem, besides dark blood coagula in the stomach and colon, nothing of special note was discovered. Dog No. 2, after 24 hours, in contrast with his previous good health, appeared melancholic, and emaciated; there was but little further change until five months later, when there were indications of pain, then convulsions in the limbs and head; eight days afterwards these symptoms ceased, and the dog remained shy, suspicious, and quarrelsome towards other dogs. He was killed at the end of six months, nothing remarkable in the post-mortem. Dog No. 3, was inoculated with the saliva of No. 1, he remained healthy, as did the experimenter himself, who, during the operation upon Nos. 1 and 2, had wounded his finger, but had immediately cauterized the spot with the hot iron.

Lussana arguing from this record, concludes that there had been a progressive weakening of the virus of hydrophobia, through the successive inoculations (analogous to the results obtained by Pasteur in his experiments upon chicken cholera). The inoculated virus gave rise to melancholia, which had a mild course. This may help to explain the cases of recovery noted in human and veterinary practice. Possibly this also explains the fact that up to the present, no case of inoculation man to man has been observed, while the experiments prove that the rabies' poison may be transferred with effect from man to the dog, although under a modified form.—*Centralblat f. Chir.* February 12, 1881.

Professor Huxley has been appointed to the inspectorship of fisheries.

It is stated that 4,405 medical students matriculated in the different German universities for the session 1880-81; 3,969 matriculated in 1879–80—of the former number, 311 were foreigners. *The Berlin Klin. Woch.*, commenting upon this increase, anticipates that shortly the M. D. will have penetrated into the most remote corners of the Fatherland.

REPORTS ON PROGRESS.

SURGERY.

Improvement in Plaster of Paris Dressings.—G. Wackerhagen introduces into plaster of Paris dressings a strip of soft rubber, three-quarters of an inch wide and one-quarter of an inch thick, with a groove nearly one-quarter of an inch deep, for the purpose of guiding the shears and protecting the parts beneath when cutting the plaster. The plane surface of the rubber guide is fastened by mucilage to the non-adhesive side of a strip of rubber adhesive plaster. The fracture is reduced and retained in position by assistants and then the guide is applied along the anterior and posterior median line of the limb, which is then covered by a dry, thin bandage, to prevent the plaster from filling the groove. The usual plaster of Paris bandage is then applied. The bandage applied in this manner is readily removed at any time without discomfort to the patient by cutting along the groove with the shears ordinarily used for cutting plaster splints.—*New York Med. Jour.*, Nov., 1880.

Removal of Iron Tube from the Penis—P. J. Hayes reports an interesting case where a young man had passed his penis into an iron tube two inches and a quarter long and of seven-eighths inch caliber, the iron being about one-sixth inch in thickness. The introduction was effected without difficulty, but he was unable to remove the tube and applied to a blacksmith, who succeeded in cutting obliquely through the cylinder, but was unable to remove it, as, on attempting to separate the edges of the section, the margin of the iron wounded the organ. The tube inclosed that portion of the penis next to the pelvis, while that which extended beyond the tube was immensely swollen and edematous and threatening to become gangrenous.

The patient was etherized, and numerous punctures were made with a fine-pointed knife, thus allowing free escape of serum and blood. A narrow bandage of fine muslin, wrung out of warm water, was then applied as closely as possible, commencing at

the extremity and advancing toward the tube, thus compressing and emptying the engorged tissues and at the same time allowing the serum to filter through the meshes of the muslin. Having thus reduced the volume of the penis, he succeeded in introducing a flat hernia director beneath the incised edges of the divided iron. Two ordinary directors were then introduced beneath the cylinder so as to facilitate its removal, and by steady traction the cylinder was drawn off. The young man was able to leave the hospital in three or four days with an organ little damaged.—*Brit. Med. Jour.*, Jan. 29, 1881.

Hot Fomentations—Richard Neale gives an ingenious method of preparing hot fomentations, which was suggested to him by a patient. The flannels are merely placed in the steamer of an ordinary potato steam-kettle, where they quickly become permeated with steam when the kettle is placed on the fire, and can be readily changed without fear of scalding the fingers in wringing them out.—*Brit. Med. Jour.*, Jan. 29, 1881.

Postural Treatment of Fractured Clavicle.—R. J. Levis presented to the Philadelphia Academy of Surgery three cases of fractured clavicle treated at the Pennsylvania Hospital. The patients were put to bed in the supine position with a pad under the inferior angle of the scapula to fix it and make it a lever. Then by slightly elevating the head, to relax the sterno-cleido-mastoids, and carrying the arm of the injured side across the chest, accurate apposition of the fragments is usually obtained. If necessary, a bag of shot or sand may be laid upon the point of the shoulder. After ten days of this treatment, the bone is sufficiently united to allow of treating the patient in the upright position, without any special apparatus other than a simple sling.

[The reporter has seen a perfect result from the postural treatment of fractured clavicle in a case where it was necessary to confine the patient to bed on account of other injuries.]

—*Philadelphia Med. Times*, Jan. 29.

Luxation of the Head of the Fibula.—Dr. Oldright reports a case of this rare dislocation. The patient was a child of two years, who had fallen to the floor from a chair. The head of the fibula was displaced backwards. It could readily be replaced but was as readily thrown out again. Treatment by splints and

pad had failed to secure any satisfactory results at the time of report, three months after the case first came under treatment. —*Canadian Jour. of Med. Sci.*, March, 1881.

Epileptiform Neuralgia Treated by Nerve Stretching.—W. J. Walsham relates the history of a patient 50 years old, a woman, who had suffered for ten years with attacks of pain in the parts to which the right infra-orbital nerve is distributed. The attacks had increased in frequency and severity, and were not materially benefited by any treatment that was adopted. February 3rd, 1880, the infra-orbital nerve was exposed just below the spot where it comes from the foramen, and was stretched with considerable force. She recovered favorably, except that she had two attacks of erysipelas, which retarded her convalescence somewhat. Five months after the operation there had been no return of the pain.—*Brit. Med. Jour.* Dec. 25, 1880.

Coin in the Esophagus for two Years.—Dr. Frew showed at the Pathological and Clinical Society of Glasgow a half-penny which had remained in the esophagus of a four year old child for two years. It had produced obscure symptoms of obstruction; but the parents of the child were unwilling to allow of surgical exploration. Finally, the coin was ejected in a fit of vomiting.—*Glasgow Med. Jour.* March, 1881.

Carbuncles—H. C. Howard finds most satisfactory results from treating carbuncles as follows: A circular piece of court-plaster, isinglass plaster preferred, is cut of a size sufficient to extend about two inches on every side beyond the base of the carbuncle. From the center of this a circular piece is cut, large enough to expose the apex and a considerable part of the body of the carbuncle. This is moistened and applied so as to fit closely about the base. Crystallized carbolic acid is then applied freely to the exposed part, by means of a spatula or knife. Another piece of plaster, non-fenestrated, is then applied over all, so as to cover the entire carbuncle and surrounding tissues. A compress of cotton is then applied and the whole secured by bandages. A little pain is generally experienced at first: this soon disappears together with the pain of the carbuncle itself on account of the local anesthetic effect of carbolic acid. In five or six hours the dressing may be removed and the parts carefully washed. A little slough will generally be found at the

apex. All the loose, soft tissue should be carefully removed, in which a small penis syringe is very helpful, as much of this matter may be drawn out by suction. The application of plaster and carbolic acid should then be repeated, the cavity being packed with crystals of acid. Two applications are generally sufficient. The parts should be dressed afterwards like any granulating surface.—*Chic. Med. Rev.*, Feb. 5, 1881.

Tooth-plate in the Esophagus—Mr. Hardie related before the Manchester Medical Society the case of a patient who swallowed a small tooth-plate with two teeth while asleep. The plate could be felt ten inches down the gullet by introducing a probang, and could easily be caught by a coin-extractor; but could not be dislodged. The patient declined to submit to esophagotomy. A few days later the plate was found to have advanced an inch further down the esophagus, and at intervals it made its way further down the tube, until at last it passed into the stomach. Finally, five months after it was swallowed, it passed per anum.—*Brit. Med. Jour.*, Feb. 19, 1881.

Dislocation of the Inferior Tibio-Fibular Articulation—A. McPhedran notes the case of a young man who, while walking over some lumber in a saw-mill, fell and injured his ankle. He was seen a few minutes after the accident occurred. The foot was considerably inverted and slightly extended, and little passive motion of the ankle was possible. The external malleolus was displaced forward, apparently lying in front of the ridge forming the anterior border of the external surface of the lower end of the tibia. Measurement from the malleolus to the tendo Achillis was about twice what it should be. On grasping the foot by the toes and heel, and everting it, the malleolus returned to its place with almost as distinct a sound as is heard on reducing a dislocated shoulder. Complete recovery resulted in a few weeks.—*Canadian Jour. of Med. Sci.*, January, 1881.

N.

GENERAL MEDICINE AND THERAPEUTICS.

Treatment of Constipation by the Swedish Movement Cure—Benjamin Lee, M. D. says there are very few cases of constipation, however obstinate, which will resist a fortnight of this

treatment daily, and many cases will yield in a week. The time occupied in carrying out the treatment is about an hour. It consists in:

1. Deep inspirations in the erect position.
2. Leg flexion and extension while half lying and resisting.
3. Trunk twisting while the patient resists.
4. Thigh extension, forced, patient resisting.
5. Circular twisting with pressure upon stomach and in the lumbar region.
6. Colon stroking.
7. Spine extension.
8. Liver vibration. (Movement cure blue pill.)
9. Abdomen kneading, pressure with vibration over solar plexus.—*Med. & Surg. Rep.,* Feb. 19, 1881.

Desiccated Ox Blood and Hemoglobin—Dr. Le Bon says that desiccated ox blood and hemoglobin has been thoroughly tried in the Paris hospitals and found very efficacious in debilitated patients. It is indicated in those cases that require raw meat, iron, or the phosphates. The elixirs or wines sold as containing the essential principles of blood or meat are of comparatively little value, and are devoid of the nutritive properties contained in the albuminoid principles which are so essential.—*Med. Times & Gaz.*, December, 1880.

Bimeconate of Morphia—Dr. T. B. Curtis, of Boston, thinks that this preparation is far superior to any other opiate in certain exceptional cases in which opium is not well borne. He contends that it does not produce the head, stomach and bowel symptoms which usually follow the administration of opium or morphia. It should be prescribed in twice as large doses as morphia. He has used it in quite a number of cases, in which the patient could not tolerate any other preparation of opium, with good results.—*Boston Med. & Surg. Jour.*

Gelseminum in Facial Neuralgia—Benj. Clarke, F. R. C. S., recommends tinct. gelseminum (Apothecaries Company's preparation) in 15 *m.* doses, repeated every half hour, until the patient is relieved. He says he has had very good results in all but a few exceptional cases. The patient should assume the recumbent posture and retain this position while he is under the influence of the drug.—*Brit. Med. Jour.*

Gelseminum in Incipient Epilepsy—Drs. Wiseman and Crump speak very favorably of gelseminum in incipient epilepsy. Although their experience has been very limited, they have had such good results that they recommend it to the profession.—*Vir. Med. Mon.*

Apocynum in Dropsy—T. S. Dalmey, M. D., states that he has used a tincture of the fresh root of apocynum cannabinum with marked benefit in quite a number of cases of dropsy. He calls more especial attention to its use in dropsy attending Bright's disease. In small doses it is a tonic and antiperiodic; in larger doses, emetic, cathartic, diuretic and diaphoretic. Profuse catharsis is not attended by much tormina or tenesmus. Its action on the heart is similar to digitalis. Only preparations made from the fresh root are reliable, as it soon loses its properties by age. He uses a tincture the strength of which is one part to six, and gives of this gtt. v to xxx three times a day. He claims for it the following advantages: 1st. The small quantity required to produce free diuresis, emesis or catharsis. 2d. Its pleasant aromatic taste. 3d. Its tonic properties, which compensate for the depression consequent on free catharsis. 4th. Its harmlessness, an overdose being speedily followed by free emesis. He closes by saying: "With this remedy at our command, I conscientiously believe paracentesis to be in most cases unnecessary."—*N. O. Med. & Surg. Jour.*, February, 1881.

The Therapeutics of Tea Drinking—P. Maloney, in his interesting paper on the above named subject, says that those who drink strong tea are frequently annoyed with headache, indigestion, constipation and other troubles brought about by tannic acid, which tea contains in the proportion of about twenty-five per cent. The pepsin, which is always present during the process of normal digestion, is precipitated and rendered inoperative by the tannin. As the amount of tannin present in an infusion depends upon the length of time the process is carried on, it can be reduced to a minimum by permitting the tea to draw only three or four minutes, instead of pursuing the usual course of allowing it to steep for a quarter of an hour or longer.—*Australian Med. Jour.*, Oct. 15, 1880.

J. P. KINGSLEY.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, February 1881. Dr. Boisliniere in the Chair.

Dr. S. G. Moses demonstrated, with the manikin, the action of Tarnier's forceps as improved by Mathieu, of Paris.

SARCOMA OF BREAST.

Dr. G. A. Moses presented a specimen of a sarcoma removed by him that day. He said the patient, a lady aged 42 years, noticed a lump in the left breast nearly a year ago, which would become increased in size occasionally, and was at times somewhat painful. Under the advice of her physician, poultices and soothing applications were used with some relief to pain. When I first saw her, three months ago, the tumor was nearly the size it is at present, perfectly hard and well defined; its removal was advised. She hesit ted about it, but finally, after a consultation, as the tumor was steadily although slowly increasing, very painful and increasing in tenderness, and she had severe attacks of inflammation of the breast, accompanied by prolonged fever, she consented to operation. There was no lymphatic complication. It had not the characters of malignancy. All the vessels were large and there were one or two soft places in it, as cysts. The nipple was not retracted, and upon section, as you here see, the mass is inclosed in a dense capsule and contains, near its surface, a small cyst or softened area.

I think it is safest to remove these tumors as soon as they begin to grow, or occasion pain. In this case, as is quite common, the mental anxiety exerted a most depressing influence, and if for no stronger reason, I should on this ground have considered operative interference advisable.

MOLES.

Dr. Engelmann—Mr. President, I have here some specimens which will serve to demonstrate the formation of moles and the gradual changes which take place in the blighted ovum as it passes in appearance from the delicate shaggy sack of early, healthy, miscarriage to the fully developed mole, the fleshy mass, containing only a small cavity and not a trace of an embryo.

OVARIAN TUMOR OF A HEN.

This large specimen, of peculiar appearance, I will also show, as it is a rare one and happens to be at hand, though not connected with our subject. It is an ovarian tumor taken from a hen. This section which you see here is through the center of the tumor and it has been so placed as to display the entire cut surface. There were two tumors; one, of which this is half, was rather larger than a large sized orange, and the other smaller—about the size of an egg. It was a hard mass, in very distinct layers, of brick-red and orange color, but apparently not forming a distinct tissue—containing no blood vessels. It has lost somewhat in appearance; the layers showed to much better advantage before. The center of the tumor does not seem to be an organized mass, but a hollow cyst, surrounded by a dense conglomerate, an inorganic mass.

It is a very large tumor, comparatively speaking, and we rarely find tumors of a corresponding size in the human female—such as are greater than the body in weight, which is certainly the case here. This is all tumor—there is very little alcohol in the vessel—and its weight is considerably greater than that of the body of the majority of hens, probably an unusual case, comparable to a very small woman with a very large tumor.

MOLES.

Now, here are two ova. This one is in a perfectly healthy, normal condition, which I merely show for the purpose of comparison. Rarely do you see one so perfect and so well developed, and we must pause to examine more closely this unique specimen. Have you ever had an opportunity to observe the condition here so beautifully depicted? You see the embryo one-third of an inch in length, and you see on the embryo the umbilical vesicle, which very soon disappears. This is the only

specimen I have ever seen in which it was so well developed and so distinctly visible. It is only a short time that the umbilical vesicle remains in this condition. Here is the embryo still attached to the membranes. The inner lining of the sack is the smooth amnion, while the outer surface is still formed by the shaggy chorion; the vesicle is firmly adherent to the embryo.

The other ovum, which you now see, is two weeks older and no trace of the vesicle is left. Of course this is long before the time of formation of the placenta, and we have a very distinct shaggy chorion, as before mentioned. In this case the cause of miscarriage was a good dose of cathartic pills, perhaps unnecessary, but not intentional, and a healthy ovum was expelled. The cause of the miscarriage did not lie in the ovum itself, as is so often the case, when a pathological condition of the ovum is followed by changes which resu.t in labor-pains and the expulsion of the morbid mass.

We have examined the healthy ova and we will look at two other specimens in which we see the ovum blighted and the mole already distinctly formed. It is a matted mass, mainly consisting of clotted blood. We still find the cavity and a part of the navel-string, but the embryo itself has died off and disappeared; and when we open the mole we find at the bottom of the small cavity which it contains, a mass of detritus, a whitish powder, the remains of the embryo.

By the kindness of my professional brethren, many of whom have taken the trouble to preserve for me such specimens as fell into their hands, I have secured a full series of these blighted products of conception, in all stages, from the perfect ovum to the mole which contains nothing but a small cavity, perhaps the navel-string with a little nodule on it. I have seen the embryo falling to pieces by simply shaking of the bottle when it still existed in a mole, and I have often found them containing nothing but fluid with a little powdery mass—the remnant of the embryo.

This is quite a perfect mole; here is the decidua, the thickened mucous membrane—and in it you see nothing at all resembling an ovum; there is a perfectly smooth cavity, and those few remnants of chorion which identify it as a product of conception.

In the other specimen you see one portion still distinctly showing the ovum. There is a part of the chorion, and here the amnion is seen, and you will notice the extravasation of blood between the membranes separating them to the extent of one-third of an inch; as the extravasation of blood increases more and more, the cavity becomes smaller and smaller, the walls thicker and the ovum assumes the characteristic appearance of the *flesh-mole.*

MANAGEMENT OF THE CORD.

Dr. G. A. Moses.—Mr. President, it will be remembered that some time ago while discussing the subject of delivery in which the cord encircled the neck of the child, Dr. Boisliniere suggested that it would be proper at times to cut the cord before delivery was completed. Recently I had occasion to recall the suggestion. I had delivered, with forceps the head of the child—it was a forceps case of a primipara with a small pelvis—when I found the cord encircling the neck, so as to hold the head fast. It was wrapped tightly twice around, and could not be dislodged by traction or loosened at all; I cut the cord in the vagina and completed delivery at once. I think it was the only resource by which the child could have been delivered alive.

Dr. Ford.—Mr. President, some authorities advise lifting the cord over the head, but this is not always practicable. If the cord is tight there are a good many dangers and disadvantages attending it. In the first place the labor is delayed; then there are dangers to the uterus, dangers to the attachment of the placenta and trouble with the navel. I have seen several cases where the navel has been a good deal disturbed, ulceration which was slow to heal occurring in consequence, I think, of undue traction put upon it. No doubt Dr. Boisliniere's suggestion is a very good one, and I intend to try it myself, when occasion presents. The best plan is to get the cord out of the way as easily as possible. If I could not get it over the head easily, I would cut it. I think it is preferable to making undue traction.

Dr. G. A. Moses.—Mr. President, I think the doctor is right about the matter. The best plan is to raise the cord over the head if it can be done, but in this case it was impracticable; the cord was not sufficiently long. I attempted it two or three times. There is no trouble about it. It makes a dirty delivery.

that is the only objection. There is a very careful, antiseptic way of treating the cord by Dorhn, of Vienna, which exhibits the absurdities, which may be reached; the cord is to be tied some inches from the body after delivery, it is then to be carefully washed with a two and a half per cent. carbolized solution, then carbolized ligatures are to be applied, the redundant portion of the cord is cut off, a layer of carbolized wool is applied over the stump which is to be retained in place by sticking plaster. This is not to be disturbed for seven days, when it is to be cleansed with a carbolized solution, and if not separated the remains may be cut off by scissors and new antiseptic dressings adjusted. This seems to me an absurdity of antisepsis. I am in the habit of treating the cord on Dr. Goodell's plan, simply letting it hang free and unbound, exposed to the air.

In 12 hours or at most 24, the stump has become a dry, withered cord, which is cast off usually by the 5th or 6th day. I allow no swathing or belly bands to be used and, although nurses and mothers object at first, they are pleased with the result.

Dr. Coles.—Mr. President, In reference to this matter of the management of the cord, I suppose that there is no doubt but what there are cases occasionally met with where the cord is extraordinarily short, and where it is wrapped a number of times around the child's neck, in which we find it necessary to sever it, in order to complete the labor; but there is a question in regard to the management of the cord, which is an interesting one, and on which I would like to hear the views and experience of the society, especially as it has been considerably mooted, of late years by certain French and German authorities, who have recorded some very interesting observations on the subject. It is as to the effect upon the child of the early, as compared with the late severance of the cord. According to these authorities, among whom is Budin, Schücking, Zweifel, Hofmeir and others, the child is always placed at a serious disadvantage by severing the cord early. It is taught in the text books that the cord should not be cut until the child breathes or cries out lustily, but it is generally considered a rather important matter by the family and friends, that the cord be tied and cut as quickly as possible. We all know that as

soon as labor is completed, some one usually pushes a pair of scissors into our hand, with which to cut the cord; the nurse and by-standers seem anxious to have it severed, so that the child may be speedily taken away. The mother, generally, seems to imagine the child is liable to suffer in some mysterious way if the cord is not cut early. Now the authorities that I have alluded to contend that the child, after it is born, receives a certain quantity of blood from the placenta, which is essential to its well-being; they claim that a certain quantity of blood, varying from two to three ounces, is squeezed through the uterine contractions into the circulation of the child, aided by the suction force of respiration. Dr. Hofmeir, of Berlin, instituted thirty-two experiments, placing the child at the moment it was born, and before the cord was tied, on delicate scales, in order to note its weight then, and also the change in weight after some minutes had elapsed. The result was an average increase in weight of about two ounces. This increase in weight he considered due to an extra amount of "*reserve blood*," which has, during the interval, entered the circulation of the child from the placenta. This reserve blood, as I have said, is forced into the infantile circulation partly through uterine pressure upon the retained placenta, and partly through the suction induced by the new pulmonary circulation which is set up in the child with the establishment of respiration. In order to get the full benefit of the reserve blood, this author holds that it is best not to tie the cord until the placenta has been pushed off by the uterus, and if, by any accident, the after-birth is suddenly expelled, with the child, this mass should be thoroughly squeezed with the hands, in order to give the baby the full benefit of all the blood which physiologically belongs to it.

Schücking goes so far as to protest against the usual practice of cutting the cord and allowing some hemorrhage from its severed end in cases of asphyxia in the newly born. He says that this practice is founded on the supposition that the child's heart is already surcharged with blood and must be relieved at any price, an idea which he disputes, for the reason that at the first respiration the blood rushes into the pulmonary vessels, leaving the extra-thoracic vessels empty. Now, if the cord be cut early, and before the child gets the benefit of the reserve blood, while at the same time the cord is allowed to bleed, a condition

of anemia is set up which tends to lessen the sensibility of the medulla. The result is that the respirations, instead of improving, actually become weaker and finally stop entirely. Schücking therefore contends that in such cases artificial respiration should be resorted to while the cord is still intact.

Another interesting question presents itself in this connection, and that is in reference to the early feeding of the child. It is a popular belief that the child needs food almost at the moment it is born, and the trouble we have with nurses and others on this subject is proverbial. But if it be true that the child receives an increment of blood as the last parting gift from the womb through this extra reserve blood, which is transfused into its circulation immediately after birth, it may aid in explaining why nature has neglected to provide milk in the breasts of the mother during the first few days. The child thus starts out with an extra supply of ready-made blood in its system, which is adequate for its wants until milk is secreted. Such considerations as these, together with the fact also observed by Zweifel, of Erlangen, that children in which the cord is tied late thrive better, are stronger and heavier at the end of a week, than those in which it is ligated early, have induced me to be much more careful to avoid being precipitate in severing the cord than formerly.

Dr. Boisliniere—I think the gentleman is correct in a great majority of cases, but I don't adopt those somewhat extreme views of Budin and some of the German writers. The rule I have always observed is not to cut the cord until the child breathes, or until the cord ceases to pulsate; and there is a great advantage in waiting to that extent, and then ligating the cord, because the placenta when full of blood is more easily detached as the uterus contracts over it. I still adhere to the rule, in a case where venous congestion occurs in the child, of cutting the cord immediately, especially if there be a marked cyanotic condition, or where there is difficulty in establishing respiration, or a state of impending asphyxia. In those cases I always make it a rule to let the cord bleed to the extent of half an ounce or more until the cyanotic condition has disappeared. By this method I am satisfied that I have saved many lives.

Dr. Engelmann—I wish to call attention to an interesting feature, ethnologically interesting at least; it is this, that after a

great deal of research we have at length attained such a state of perfection that we now adopt that practice which has been followed by savage people for a great many centuries, or perhaps for ages and ages. I have reference to the treatment of the funis; but it may be said with equal truth of others of our obstetric customs, that the very practice which our most advanced obstetricians are now beginning to adopt after continued observation and the most thorough study is an old story to the Sioux midwife or the Hindoo diya.

Dr. Coles mentioned the very correct experiment of placing the child on the scales immediately after its expulsion, and stated that it increased considerably in weight up to the time of cutting the cord. This is a fact but recently demonstrated by most scientific physicians, yet most of the savage races, people more akin to animal than to man in their reason, and following their instincts in all their doings, have conducted labor as if well aware of this fact; they were certainly instinctively conscious of it. Among these savage tribes, among our Indians, and the natives of Africa, it is a rule not to cut the cord until the placenta is delivered. The wisdom of this we shall soon see. Reference was made in the discussion to the fact that the milk does not come for several days after delivery, and that the child seeks and demands nourishment during that time. Our old women feed the infant on fennel tea and similar more or less harmful trash. The ignorant savage adopts a more rational course. He does not cut the cord until the placenta is expelled, so that the child receives at once a supply of nourishment from the blood forced into its circulation during the third stage of labor by the contraction of the uterus; the placenta is squeezed dry, and each pain adds to the quantity of the nutrient fluid which hastens through the funis into the fetal vessels—another reason for not hastening this stage of labor. While this process is going on they often stroke the funis in the direction of the child, and by this means, they say, a larger quantity is forced into the fetal organization whilst the uterus is excited to contraction. I might cite numerous other instances of the sound practice which instinct teaches. Thus in the management of the third stage of labor those in the profession who are most advanced in the obstetric art are now adopting the course which is almost universally pursued among

savage tribes—the expression of the placenta. It is their almost universal practice to develope the placenta by external pressure by a free use of the *vis a tergo*. We now do this, as we are now adopting their rule in regard to the time of cutting the funis, upon scientific grounds which those rude people have followed for ages in response to the dictates of their instincts, as every animal does in the manner of the delivery of her young.

Dr. S. G. Moses—I never have been in a hurry about labor in my life, and I have always waited until the pulse in the cord was arrested before I cut it, unless the respiration was very pronounced. I think there is an advantage in this, although in cases where there is a cyanotic condition I don't pretend to say it is the best. I don't think it makes a great deal of difference when the cord is severed if respiration is perfect. I think it is reasonable to wait until the pulse is arrested and then cut the cord, leaving about one and a half or two inches of it. I had an experience some time ago, at different times, with a lady who had two children who presented this extremely pallid condition. The children were perfect. I was not in a hurry to divide the cord, waiting until the pulsation had ceased. I had to wait some time. In these two instances I resorted to the expedient of giving the children blood extracted from raw meat as food for the first two or three days after birth. In both cases they became healthy children, but they recovered the natural condition slowly.

Dr. Gehrung demonstrated a method of assisting the delivery of the aftercoming head, by seizing the buttocks with the right hand, and the shoulders, by extending the fingers crutch-like about the neck, the whole body is then raised, while the buttocks are depressed, making the left hand at the neck a fixed fulcrum, so that flexion and extraction are performed by one action.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, Feb. 28 1881.—Dr. Leete in the chair.

PILOCARPIN IN DIPHTHERIA.

Dr. Carson stated that he had seen some mention of the administration of pilocarpin in the treatment of diphtheria in the Courier as well as in some other journal, and had recently an opportunity to try the remedy.

He was called to a family in the northern part of the city where there were three children sick. The house had been in times past a handsome mansion, but at present was used as a tenement house. It stands high on a hill which had been graded down on all sides twenty-five or thirty feet. The rooms occupied by the family which he had been called upon to visit had been formerly the parlors of the mansion, but at present were divided by wooden partitions into smaller rooms. On the south side of the house was a pile of ashes and refuse matter of all kinds. The privy, situated northwest of the house, at a distance of about ten paces, was not sewered and was very full, so that all the gases from this collection of filth were carried by the prevailing winds of the season directly into the house.

Within, the house was comparatively clean. The cellars were said to be clean: A dog had been confined for some time in the cellar under the part of the house occupied by the sick children, but he had been removed some time before and the cellar cleaned afterward.

The eldest of the sick children was a strong, healthy girl, about four years of age. At the time of the first visit she had a temperature of 101°, with a pulse of 110. There was not much depression and the child did not appear to be very sick. The mucous membrane of the mouth was red and somewhat swollen, and the tonsils were covered with a thick, firmly adherent grayish-yellow false membrane. The treatment ordered was muriate of pilocarpin, $_2\frac{1}{4}$ of a grain, triturated with sugar of milk, every two hours; brandy, one teaspoonful every half hour; also milk and Valentine's beef extract. As a local application, one

drachm of Monsel's solution to two drachms of glycerine was to be applied twice daily.

The pilocarpin produced in this case marked salivation. The progress of the case was for several days favorable, the false membrane disappearing in less than forty-eight hours, when the pilocarpin was discontinued, and quinine and iron substituted. The local application was superceded by one of carbolic acid and glycerine, one part to four. Again, after the lapse of three or four days, a small spot of false membrane appeared on one of the tonsils. This did not increase and gave no trouble. The second Wednesday after the first visit, which had been made on Saturday, the child became slightly hoarse, but as there was no increase of the patch on the tonsil, nothing was thought of it. Friday afternoon following, the voice was entirely gone and there was some difficulty of breathing, although the patch on the tonsil had not increased, and the child continued to move about the room. Still there was some fever and depression. A solution of pilocarpin—as given in the Courier for November—was ordered, so that the child would get $\frac{1}{10}$ of a grain every two hours. Brandy, a teaspoonful every hour was also ordered. That night the father came to my office and reported that the dyspnea was very great and he feared the larynx would close. Turpeth mineral in three-grain doses every fifteen minutes was ordered to be given if necessary. This, however, was not necessary, as the pilocarpin alone relieved all urgent symptoms, and in the course of three or four days all signs of the membrane had disappeared. With the exception of a paralysis of one leg, which was not of long duration, this child made a good recovery.

The second child, a boy, about two years and four or five months old, slightly built but apparently healthy, was very seriously sick. It was impossible to get the temperature or count the pulse of this child, as he was so very irritable. The pulse, however, must have been at least 140, and the temperature above 102°, as the skin was very hot and dry. There was much depression, and it did not seem possible that the child could live more than a few hours at most. The whole throat was filled with a soft reddish-yellow pultaceous mass, not much more consistent than very thick cream, which, when removed, showed uvula, tonsils and pharynx red and thickened and cov-

ered with a thick, reddish-gray false membrane, firmly adherent. For this child, $\frac{1}{42}$ of a grain of pilocarpin, triturated with sugar of milk, was ordered to be given every two hours; a teaspoonful of brandy every fifteen minutes, and Valentine's beef essence and milk. The same local application was used as in the former case. At the evening visit (made between 5 and 6 o'clock), the child was apparently worse. The membrane on the right side had extended upon the soft palate and there was no diminution of the creamy exudation. There was no apparent effect either from the pilocarpin or brandy, which had been given regularly as directed. This treatment was ordered to be continued through the night. The next morning there was no decided change, except that the mucous membrane seemed a little less red and there seemed to be not quite so much of the pultaceous matter. The depression was still great, but there was no further extension of the false membrane and the skin was slightly moist. There was very little salivation. The treatment was ordered to be continued during the day. At the evening visit there was a very decided change. There was a marked salivation, the pultaceous matter had entirely disappeared and the membrane seemed to be loosening around the edges. The child was in every way much better. The treatment was continued. Three days after this all the membrane had disappeared except a small thin layer on one tonsil. At this time the pilocarpin was discontinued, and a little chlorate of potash substituted. The brandy was to be given every hour only, and the throat touched with carbolic acid and glycerine (1 to 4). The second Tuesday following the first visit, the membrane again appeared on both tonsils, (from one it had not entirely, though almost, disappeared), and a solution of the drug as given in the first case was ordered in this, so that $\frac{1}{10}$ of a grain would be given every two hours, with brandy every half hour as the depression was not marked. At visit in the morning the child was much depressed, although the membrane had almost entirely disappeared. This depression was correctly attributed to the drug, as the result proved, although there was not as much salivation or perspiration as might have been expected. The brandy was ordered to be given more frequently, and the pilocarpin less so; and at the evening visit the child's condition was much improved. At this time a part of all fluids swallowed was regur-

gitated through the nose. The pilocarpin was now continued for three or four days, when all signs of false membrane having disappeared, it was discontinued and iron, quinine and strychnia substituted. The paralysis of the fauces continued and was followed in the course of ten days or two weeks by a complete paralysis of the lower extremities. At time of last visit the child was slowly improving.

The third and youngest child of this family was a chubby little infant of six months. The manifestations of the disease in this case were very slight and little treatment was required. Calomel in small doses, with soda bicarb. in large doses was ordered. This was followed by quinine. This child made a good recovery.

The fourth one of this family affected was a boy fourteen years of age. Little if any treatment was required.

While the foregoing cases were under treatment, two children in another family, in the same house and on the same floor, were affected—one a child two and a half years of age, the other a girl about thirteen years of age. In both cases the attack was light, but the pilocarpin soon dissolved all signs of the membrane which had formed on the tonsils in both cases. The solution, as already referred to in the foregoing cases, was used in these cases.

The four last mentioned cases would not have been considered as cases of diphtheria had it not been for their intimate association with the two first cases mentioned, which, by the subsequent paralysis, proved, beyond a peradventure, the correctness of the diagnosis.

Dr. Carson did not consider that the result of such a small number of cases justified any definite conclusions as to the value of pilocarpin in the treatment of this disease; but it did seem to warrant and invite further experimentation, and he further hoped that all who might be induced from this report to try the drug may be equally as successful in overcoming this terrible disease.

Dr. Post remarked that as pilocarpin is very deliquescent and the drug was used in the form of powder in the treatment of the first cases, the children probably received rather smaller doses than were prescribed.

Dr. Carson stated that only a small quantity of the medicine

was compounded at a time, and hence he thought little influence could be assigned to the deliquescence of the salt in diminishing the amount of the dose. He combined brandy with the pilocarpin to antagonize the depressing effect of the drug as well as that of the disease. The weakest child tolerated it best, taking a spoonful of brandy every fifteen minutes.

Dr. Leete called attention to the fact that the Brooklyn physicians rely upon alcoholic stimulation as the main element in their treatment of diphtheria, and suggested that these physicians would probably ascribe the favorable result of Dr. Carson's cases to the liberal use made of brandy, rather than to the pilocarpin.

PILOCARPIN.

Dr. Hardaway said that he had made use of this drug in a number of cases of skin disease, and he had observed that it is necessary from time to time to increase the dose in order to maintain the action. He had noticed that patients seemed to improve generally under its use, that the digestion was better and the general effect was that of a tonic. In some cases of general eczema of old men, it had a depressing effect. He had not made special observations as to influence upon the pulse. He thought there might be a danger of suffocation from the excessive salivation in case of children. On account of the annoyance from salivation disturbing the sleep of patients who have taken it, he avoids giving it late at night.

Dr. Pollak reported that in seventeen cases where he had administered pilocarpin there was no rise of the pulse to indicate the influence of the drug. In one case the pulse arose rapidly to 110, full and strong, in one or two minutes after hypodermic administration, falling to a normal rate *pari passu* with the salivation.

Dr. Kingsley stated that in some cases very great depression is observed, languor, lowering of the heart's action coming on after the salivation. The action of the drug when administered by the mouth commences in twenty to thirty minutes, and continues for two to four hours.

Dr. Pollak said that when given hypodermically the action of the medicine appeared in about three minutes.

CANCER OF PANCREAS.

Dr. Carson narrated the following case: About January 1st a

gentleman about 60 years of age, came to the Sisters' Hospital. He had been living for some forty years as a miner among the mountains. He had not been dissipated; had not had syphilis; and had never been drunk. His health had been uniformly good; never had trouble with lungs, heart or liver. Last August he began to suffer with a pain a little to the right of the pit of the stomach; his bowels acted irregularly; the stomach became irritable, especially to acids. He continued to attend to business until the middle of September. He gradually lost flesh, and the area of pain extended around almost to the spinal column; he became much weaker, and the skin acquired a pronounced yellow hue, as also the sclerotics. He had been in Indianapolis under treatment, and went from there to Hot Springs, Ark., where he received no benefit. When he entered the Sisters' Hospital, he was very much emaciated; complained of pain in the middle of the right side over the region of the liver. The right lobe of the liver was much enlarged, extending down midway between the border of the ribs and the crest of the ilium. He subsisted chiefly upon milk; had little taste for meats, sweets or acids, though there was sometimes a craving for the latter on account of a peculiar taste in his mouth. The diagnosis made was first stage of cirrhosis of the liver.

Muriate of ammonia was ordered for him, under the use of which he improved quite decidedly for a few days. He gained in appetite and strength, but soon was obliged to discontinue it. He was then given a pill of inspissated oxgall, nux vomica and extract of colocynth every three or four hours. The stools had been light or clay-colored ever since the time when the pain commenced, and without any odor. The pills seemed to benefit him for a time. The stools became more regular and more natural. He was given also Carlsbad water and wine, iodide of potassium and nitro-muriatic acid. The tissues became more deeply jaundiced, strength failed more and more, and finally, about six weeks after entering the hospital, he died.

On post mortem examination the skin was found thoroughly icterode; there was scarcely any adipose tissue; the muscles were atrophied, and there was a greenish color of the tissues; the contents of the abdominal cavity were colored with bile; the omentum was adherent, and the coils of intestines were

agglutinated to one another, and to the abdominal walls; the pleura on both sides were adherent; the cavity of the pericardium was almost perfectly dry; the right heart was filled with thin, dark blood; the left heart was empty. On removing the liver it was found to be from 30 to 50 per cent. larger than normal. The bile ducts and the gall bladder were well filled with bile; the intestines were almost empty, but colored with bile. The large end of the pancreas was enlarged and very hard, both to the touch and to the knife in cutting.

Dr. Todd, who had examined the specimen at Dr. Carson's request, stated that the common bile-duct passed through this hard mass for the distance of an inch, being about the size of a common knitting-needle. There was notable dilatation of all the biliary passages, even in the liver tissue itself. In answer to a question from Dr. Post, Dr. Carson stated that no fat had been observed in the stools of the patient, nor had there been noticed any special difficulty in digesting fats.

GELSEMINUM IN PRURITUS, ETC.

Dr. Hardaway called attention to a recent paper of Dr. Bulkley, in the *New York Medical Journal*, upon the use of gelseminum in pruritus. He had recently had an opportunity of testing this remedy in one case, which had given most satisfactory results. An old gentleman had come into his office suffering intensely from an intolerable itching, which annoyed him so much that he would tear his skin during his sleep. Fifteen drops of the tincture of gelseminum were administered at once (about 4 P. M.), and at 7 P. M. the dose was repeated. The next day he reported himself as entirely relieved, and there has been no recurrence of this symptom since that time.

Dr. Hardaway asked the experience of the gentlemen present with reference to the dose of this drug.

Dr. Carson had used it in ten drop doses.

Dr. Gehrung had given thirty drops three times a day, but owing to the variation in strength of different preparations, he thought it best to commence the use of a new preparation, with doses of ten drops.

Dr. Carson had seen no physical signs in any of his cases. The first evidence of action of the drug was a depression of the pulse.

Dr. Leete had found that the depressing influence varied very much with different patients. A classmate of his in the medical college proposed to write a thesis upon gelseminum; and nearly killed himself in making experiments upon the physiological effects of the drug.

Stated Meeting, March 14th, 1881. Dr. C. E. Michel in the Chair.

DIGASTRICUS MUSCLE IN MAN AND THE MONKEY.

Dr. Todd presented a specimen showing the distribution of the muscular fibres of the digastricus muscle in the monkey. He also showed a drawing which he had made some years ago of an anomalous arrangement of the digastricus observed in a human subject. The specimen and the drawing together illustrate very distinctly the fact that irregularities of anatomical structure in man are but reversions to the type that is found regularly in the lower animals.

ABDOMINAL TUMOR.

Dr. Robinson then introduced to the Society Dr. Vandoover of Cape Girardeau who had come to the city for consultation with reference to his own case. He first noticed some three months ago the appearance of a tumor in the left hypochondriac and iliac regions. He has been practicing for some years in a section of the country where malarial disease is prevalent. This tumor has been painful at times though not excessively so. He had been in bad health for perhaps two months before he discovered the tumor. There had been pulsation in the tumor but it seemed to be rather transmitted from the abdominal aorta than originating in the tumor itself. [An opportunity was then afforded to the members of the society to examine the tumor.]

Dr. Michel remarked that the tumor seemed to be a diffused nodulated mass, or rather to consist of several masses, and that the pulsation was not in the mass itself. A noticeable fact in the case is that the general health of the patient has markedly improved during the last two or three weeks, his weight having increased some fifteen to twenty pounds, while the size of the tumor has materially diminished. He thought the history of rapid growth and then such decided and rapid

diminution in size, with improved general health, was inconsistent with the supposition of malignancy of the growth.

Dr. Maughs suggested that it might be an hypertrophied left kidney.

Dr. Prewitt was inclined to think that it was a glandular enlargement; that affection of the kidneys, spleen and liver could be excluded. The growth was certainly behind the bowels, and was movable; he believed it to be a growth of the mesenteric glands.

Dr. Hodgen did not express a positive opinion, said that if he were put in a condition where he would have to guess, he should consider it an enlargement of the lymphatic glands along the spinal column, though the improvement of his condition during the last three weeks would hardly indicate that.

Dr. Robinson said that he was satisfied that the tumor was a growth of the mesenteric gland, though as to the character of the growth he was not so well satisfied. He excluded the supposition of disease of the abdominal viscera; because their functions had not been disturbed. The only function that had been disturbed at all was that of the stomach at first. There were no symptoms of gastric inflammation; there had been occasional diarrhea, and there had been some evidence of peritonitis in the form of ascitic exudation. At the time when the tumor was largest, it extended almost into the pelvic cavity. He had advised Dr. Vandoover to take the bitter wine of iron with Fowler's solution.

Dr. Maughs suggested the addition of quinine.

Dr. Hodgen remarked that a country physician, practicing medicine in a malarial climate, was likely to be pretty well saturated with quinine; and on inquiry Dr. Vandoover stated that he had taken about three grains of quinine every three hours during two days of each week ever since last August.

LIGATION OF ARTERIES TO CONTROL INFLAMMATION.

Dr. Mudd then read a paper upon "The Ligation of Arteries to Control Inflammation," vid. p. 271.

Dr. Maughs complimented Dr. Mudd's paper, and said that this operation had been performed repeatedly during the war by surgeons of the Southern army; and that it is recommended for this purpose in Chisholm's work on surgery. Drs. Kennedy, Thompson and others had made the operation at Lauderdale hospital.

Dr. Prewitt did not know the date at which Dr. H. F. Campbell, of Georgia, first made the operation, but Maunder had ligated the femoral artery for the cure of inflammation of the knee joint, supposing that he was the first to adopt that mode of treatment, but he states in connection with that case that he found afterward that it had been previously practiced in America.

DIGITALIS—CHEYNE-STOKES RESPIRATION.

Dr. Saunders related a case wherein the cumulative effect of digitalis was illustrated; and in which also the Cheyne-Stokes respiration was observed to occur, though the patient lived for three months afterward.

Dr. Robinson had seen two cases in which this peculiar respiration was observed, and death did not occur for some weeks or months. Both these patients suffered from Bright's disease of the kidneys, and there was considerable edema of the lungs. Dr. George Johnson has recommended the use of chloral in the dyspnea of Bright's disease of the kidneys.

Dr. Baumgarten had seen a case in which there was the same peculiarity of the pulse as that noted by Dr. Saunders. There were several strong pulsations and then an apparent entire intermission of the pulsation; but on making use of the sphygmograph he found that there were pulsations recorded by the index, though too faint to be appreciated by the finger.

Dr. Gehrung remarked that the Cheyne-Stokes respiration is not unfrequently observed in hysterical women without any serious detrimental results occurring.

Dr. Robinson had seen such a case with another physician quite recently. The intermissions were prolonged for nearly sixty seconds.

Dr. Maughs also had observed the same phenomenon. The patient had an attack of hysterical coma with this peculiar respiration. The attack simulated apoplexy, but she soon recovered.

Dr. Glasgow thought the serious depression observed in Dr. Saunders' case after the administration of nitrate of potash was due rather to the rapid withdrawal of fluid by the free diuresis, rather than to the direct influence of the drug. He has seen two cases where death resulted from the free catharsis

excited by the fluid extract of broom-top. As to the supplemental heart beat, he thought this might be explained by the fact that the muscular action continued after the apex of the heart had struck the thoracic wall, and thus the factors which are ordinarily combined in the production of the first sound of the heart were separated and two sounds resulted.

Dr. Robinson had never seen any such effects from the use of digitalis as those which occured in Dr. Saunders' case, though he had sometimes seen some disturbance of the pulse at the time of the administration of the drug. He had used large doses of digitalis in the treatment of delirium tremens, and he had given doses of ten or fifteen drops three times a day for weeks and months, and had never seen the so-called cumulative effect. Thinks it difficult to determine whether in this case the effect was due to the drug or not.

TAPE WORM.

Dr. Robinson related an experience which he had had in attempting to relieve a patient of a tape worm. He had failed with several remedies that he had tried separately and finally had administered a combination which contained several of the most approved teniafuges and cathartics. The effect was much more decided upon the patient than upon the worm, as only a part of the worm was expelled while the doctor was obliged to sit up almost all night to prevent the patient from being wholly expelled.

Dr. Whitmore then presented a specimen of tape worm with a history of the case. (Vid. p. 239)

Impotence from Salicylate of Soda.—Dubrisay reports three cases of young, vigorous men, in whom very marked impotence of temporary duration was produced by taking forty-five to fifty grain doses of salicylate of soda for twenty days while under treatment for rheumatism.—*L'Abeille Méd., La Presse Méd. Belge.*, Nov. 7, 1880.

Poisonous Jelly.—A specimen of jelly was presented to the State Board of Health of Michigan, recently, with the statement that eating of it had caused sickness of a large family. The poisonous effect was due to zinc salts formed by the action of the acid of the fruit on the "galvanized" iron vessel in which it was boiled.—*Mich. Med. Jour.*, Feb. 1, 1881.

SELECTIONS.

OUR DUTY TO OUR GIRLS.

In an interesting address before the Alumni Association of Jefferson Medical College, Dr. Hamilton Osgood, after speaking of the proper ordering of food, clothing, bathing, exercise, etc., for the growing girl speaks as follows with reference to special instruction as to her own organism and functions as she approaches puberty.

It is now that the peculiar organization of the girl is beginning to assert itself. It is not enough to wait until nature has made her aware of her sex. What she has gained in physical vigor may all be lost, if in her work or play she be allowed to become unduly fatigued. The trainer never allows a young and spirited horse to be over driven and carelessly exposed. He knows what the effect of such treatment would be when the animal is called upon to show his best power. And it requires but little thought to see that over fatigue in any direction, during the years which immediately precede the announcement of sex, will detract from the girl's power to meet and bear the change. She shall rather be so trained that she will store up strength upon which she can hereafter draw in safety. It is at this early age, then, that I would have the mother begin those lessons in physiology which, apart from such general instruction in this subject as the girl may receive in school, will have an especial bearing upon her sex. The cruel prejudice against making a girl perfectly familiar with the changes she is approaching, is as wicked as it is thoughtless. Every day of our practice brings to our observation ills whose origin lies in this mistaken reticence. It not only injures our girls but the generations which follow them. This undoubtedly stands *facile princeps*, the great error in the training of the American girl. She is allowed to approach her physical future blindfolded. One day she is a child. The next, all unprepared, in touching ignorance

of it all, she enters that world which we call womanhood. Shame upon American mothers, double shame upon American physicians, that this is permitted. This, my brother physicians, is the head and front of my essay. This includes all the rest. For, amazing as it may seem, in nearly all the works on education to which mothers have access, this subject is almost absolutely untouched. And who among us, whose solemn duty it is not merely to heal, but to prevent disease, how many of us see to it that the girls of the families which look to us for advice are properly prepared for this important change in their lives? Do you say, this should be the mother's care; such instruction it is her duty to impart? So be it. So say I. But what are the traditions of that mother's training? Was it not also *her* lot to find her way along the life path without that guiding influence which her mother should have bestowed? Was *she* shielded and protected, by gentle thoughtfulness, from the dangers of ignorance at the critical age of her life? * * * * * * *

The mother is the proper physiological teacher of the girl. But she can hardly accomplish this duty without help from the physician. In and through all this development of the girl's knowledge of herself, his influence should and must almost necessarily be felt. His duty it is to see that the mother clearly recognizes and understands hers.

The girl *will* know what is hidden behind the deplorable mystery which surrounds these subjects, and if she be not told by her mother, she will obtain her knowledge in garbled, imperfect and indelicate form, out of the home; and her modesty will thus be hurt, and her natural purity be tarnished. But if there be perfect openness between herself and her mother, if she be instructed in a frank and practical manner, the mystery disappears, the purity remains and the imagination of ignorance will be put at rest. Unbroken confidence between mother and daughter will, moreover, be to the latter a wall of defence against injurious influence. How mistaken mothers are in failing to establish this fearless trustfulness on the part of their daughters! * * * * * * * * * * * * * * * * *

She shall be shown that, although she may have the studies of the boy, she cannot pursue them with the same unbroken regularity. If this be a disappointment let her be taught that underlying all the intellectual ambition of the growing girl

should be submission to that higher law of sacrifice which every woman must recognize and accept if she would reach her best possibilities. This apparent loss becomes rich gain to her in the freshness of spirit and depth of receptivity with which she renews her work. And if she ask: "Am I to be irregular in study, am I to deny myself legitimate pleasure?" The reply should be: "Yes, if in that way you can attain a higher development."

I can mention two women, honored by our sex as well as their own, who are largely responsible for the present restlessness of many of their sisters. They are noble, cultured women, of great influence. One of them confessed to a patient of mine, that last year nervous exhaustion nearly made her insane, and incidentally remarked that at her last confinement she sent off her proof sheets, and at the same moment called for doctor and nurse. You would be surprised if I told you her name. The other admitted that in spite of all she had said in public, touching the rights of women, her persistent, unrestful labor had so exhausted her, that she had modified her views, but would not confess it to any man living, and would not have the public know of it for the world. I could quote other equally significant confessions.—*Coll. and Clin. Rec.* March, 1881.

CURIOUS PSYCHICAL PHEMOMENON.

The Paris correspondent of the *Lancet* cites the following from *L'Union Médicale:*

Last October a young man had been condemned to three months imprisonment under the following circumstances: Two officers had arrested him in a urinal of the Sainte Cécile. Didier, they testified, was committing alone an obscene act, and they had observed him for nearly a quarter of an hour. The accused replied that the police had sworn falsely and that he had no memory of anything of the kind. He appealed from the decision of the court, and begged the eminent alienist, Dr. Mottet, who had treated him at the Hôpital St. Antoine to testify in his defense. Dr. Mottet, called upon to make a report, stated that Didier was the subject of a most curious nervous disease. In magnetic sleep he would get up in the night, sit

at a table and write in the dark. * * * One day Dr. Mesnet required a compress for a patient. He did not ask for it, but was only thinking of doing so. Immediately Didier, who was looking on, went and fetched one, *having read the thought of the doctor.* An experiment was then devised. Dr. Mesnet put Didier to sleep and told the house physician to think of something. The latter, looking round for some object of thought, chanced to see a female patient holding an infant in her arms. Thinking of the woman and child, the house physician placed himself in front of the sleeper and asked what he saw.

"I see a woman." "What is she like? Young?" "I can not see." "Why not?" "She holds a child in her arms and the child hides her face."

Such is the written report of Dr. Mesnet. Before the magistrate who had the hearing of the appeal, Didier seemed to have no recollection whatever of the circumstances which led to his apprehension, remembering only that he had had two profuse nasal hemorrhages in the evening, which had weakened him to such an extent that he could hardly walk, and had been obliged to rest against several lamp-posts as he went along. Dr. Mottet, called into the witness-box, declared that the accused was subject to frequent crises of magnetic sleep, during which he lost all consciousness of the outer world. The doctor proposed to put him at once to sleep. The proposition being accepted by the court, the judges and counsel retired into one room, physician and patient being conducted into another. In a few moments Didier was asleep, and Dr. Mottet returned to the council chamber, leaving two keepers at the other door. Then the magnetizer called, "Didier, get up and come here." Immediately the door opened, and Didier, pushing aside both keepers and magistrates, walked straight up to the doctor. After he had been marched about to the satisfaction of all present, one of the counsellors asked whether he might remember in the magnetic state what had occurred on the evening of his arrest. Dr. Mottet, repeating the question, ordered Didier to remember. The young man looked at him hesitatingly and beseechingly. The doctor insisted and repeated his command. "What did you do?" Here the patient took his handkerchief from his trousers pocket and seemed to be dipping it as if in water. He then passed it over his face several times. Everything was

explained. Didier had had several severe nasal hemorrhages, and not wishing to be seen with blood on his face, he had gone into the urinal in question, where there was a constant flow of water at a convenient height. The magistrates, however, were not fully convinced. Was not the man perhaps playing a clever part? Dr. Mesnet now took the place of his colleague, and ordered the young workman to sit down and write him a letter which he had sent him from prison three months before. Didier hesitated. "I can not write," he said feebly. "Why not?" "Because I am not in prison." "I will it—write." Didier obeyed hesitatingly; and when he had finished, his letter was compared with the former one. They were found to be identical. As a crucial experiment, the doctor approached quietly and suddenly thrust a pin into Didier's neck; no external manifestation betrayed his feeling. The magistrates seem to have been much struck with this proof of the prisoner's innocence, and returning at once into court, the president acquitted him on the score of mental irresponsibility.—*Lancet*, Feb. 5, 1881.

EXTIRPATION OF THE PYLORUS.

What will surgeons do next! They are rapidly going far. Thus the following will hardly be a surprise. Prof. Billroth writes thus to the *Wiener Med. Woch.* (February 5):—

"We to-day register a triumph which surgical art has recently been enabled to celebrate. The important question which has so long engaged the attention of surgeons—whether the carcinoma which so frequently attacks the stomach, and for which all internal remedies are useless, may not be made amenable to operative surgery—would seem to be at once decided affirmatively. On January 29, Prof. Billroth performed a partial excision of the stomach on account of advanced carcinoma of the pylorus, which up to the present time has been attended with success. Already, seventy years ago, Karl Merrem had shown in a dissertation, by experiments upon dogs, that the pylorus might be excised, and recommended the procedure in incurable cancer. The conviction, however, that the vital processes in man and animals were the same, was as yet too little assured,

and operative procedures too little advanced, for the operation to be ventured on. It is only during the last ten years that essential progress has been made in this province of surgery; and Billroth and his pupils have done much in that time to prepare the way for the operation. After Billroth had shown, in 1871, that portions of the esophagus may be cut out in dogs, Czerny first performed this operation on man. Then followed Gussenbauer's and Winniwarter's excision of portions of the intestinal canal and stomach in dogs, and Martini and Gussenbauer's successful excision of a sigmoid flexure that had undergone cancerous degeneration. Gastrorraphy, successfully performed by Billroth in 1877, was another step in advance, and led him to make the remark that from this operation to the excision of a cancerous portion of the stomach required but one bold step. The first, however, who performed excision (in 1829) for cancerous pylorus in man was the Parisian surgeon Péan, so well known for his numerous laparotomies, but the patient died on the fourth day; and no suitable case came under Billroth's notice until the present one.

"The woman upon whom the operation was performed on January 29 was forty-three years of age, and previously in good health, having borne eight children. In October, 1880, she suffered from vomiting, and soon presented all the symptoms of carcinoma of the stomach and stenosis of the pylorus. During the six weeks prior to the operation the constant vomiting and small amount of nourishment taken led to excessive pallor, emaciation, small and frequent pulse, and exhaustion; so that the patient, feeling her end approaching, consented to the operation proposed by Billroth. The preparation for the operation, which was performed in a temperature of 24° R. (86° Fahr.) under chloroform, consisted only in washing out the stomach with the ordinary tube. An incision about eight centimetres in length was performed over the tumor, which was readily movable under the thinned integuments. The tumor proved to be a nodulated carcinoma of the pylorus, which was in part infiltrated, and occupied more than the lower third of the stomach. The parts were carefully separated from the omentum and transverse colon, and, the vessels being tied before their division, very little blood was lost. The tumor having been completely brought on to the integuments of the abdomen, an incision was

made through the stomach one centimetre beyond the infiltrated part—first only backwards, and then through the duodenum. An oblique incision through the stomach was then directed from above and inwards to below and outwards, always at a distance of one centimetre from the infiltrated parts. After uniting the oblique incision only sufficiently to allow of its being adjusted to the duodenum, the tumor was completely separated from the duodenum, one centimetre from the infiltration, by means of an incision parallel to that made in the stomach. The duodenum was adapted to the aperture left in the stomach, about fifty sutures of carbolized silk in all having been employed during the operation. After cleansing with a two per cent. carbolic acid solution, and the application of a guard-ligature, the parts were replaced in the cavity of the abdomen. The operation, including a tedious chloroformization, occupied one hour and a half. The excised portion consisted of fourteen centimetres of the greater curvature of the stomach, and a quill could only be passed with difficulty through the pylorus. The form of the stomach was not essentially changed by the operation, the organ only being rendered smaller. After the operation there was neither vomiting nor pain. * * * From a communication of Prof. Billroth on February 13, it appears that the patient had continued to improve, so that the recovery then seemed assured. The result is indeed favorable beyond all expectation, and already suffices to show that such an operation is practicable, so that persons may now be successfully treated for a disease hitherto reputed incurable; and even when a relapse takes place, they will at least have received temporary alleviation."—*Med. Times and Gaz.*,March 5, 1881.

WEAK SPINES IN YOUNG WOMEN.

Having alluded briefly to some of the causes of spinal weakness and the symptoms as manifested in school-girls, Dr. Keating speaks more at length of this condition as observed in young women who have passed beyond the time of school attendance:

"Free from the daily restraint of school life, their hours are devoted to the absorbing necessities of society, and their

habits either become extremely active or extremely sedentary, the mania for violent exercise developing from the lassitude that follows nervous excitement; and from one extreme to the other will these girls drag out years of miserable existence whose monotony will be relieved only by the periodical tortures of dysmenorrhea. That the functions are deranged is simply in accordance with the general physical strain. In all such cases the great muscles of the back are those most called upon, and soon, from excessive tension or want of nutrition, fail in their most important duty. The equilibrium which is maintained by the concerted action of those of either side is lost by the giving way of the muscles that malposition has tended to weaken, and the stronger group brought into play draw the spinal column where they will. Neuralgic pains, backache, and internal congestions are the result, to say nothing of the occasional permanent lesion in long-standing cases by the absorption of cartilage. Weariness from anemia, chlorosis, and hysteria in all its forms is the inevitable sequence. But the principal complaint is weariness, a continual feeling of fatigue, following the smallest amount of exercise, brought on equally well by standing and by sitting, by day and by night. This feeling of weariness is more decided in the back, and is so uncomfortable, not to say painful, as to require some constant form of pressure in the lumbar and sacral regions, which, when lying in bed, is brought about by placing a pillow in the hollow. There is also an aching in one of the shoulder-blades, and a feeling of weakness in the muscles of the back of the neck. Upon examination, your patient appears well nourished, but the muscles upon pressure are found to be soft and flabby. It will be noticed when the back is examined that the patient leans more or less to one side, and if allowed to assume a natural and (to her) comfortable position, that the difference is often surprising. As a rule, the aching or weariness is found located in the muscles that form the convexity, because those on the concave or the side towards which the spinal column leans seem to draw it in that direction, and thereby stretch the muscular tissue of the opposite side. In several cases that I have seen, this view appeared to be strengthened by the fact that faradic contractility was slightly diminished on the outer convex or weaker side. I have seen cases where the pressure seemed so great

as to cause absolute pain from the curvature alone. It is scarcely necessary to enumerate further the complaints of a patient such as I have described, if the condition has been one of long standing: the interference with circulation, the in-door life, the restlessness from nervous irritability, the reflex nervous disturbances, the loss of appetite and want of nutrition, will be shown by a tangled chain of evidence that will tax the power and patience of the most amiable and accomplished of diagnosticians.

When examination shows us decided weakness in the muscles of the back, I have of late adopted a plan calculated to give the support which is needful until the nutrition and strength of the muscle have been increased by local treatment. Instead of the plaster dressing, which is so valuable at other times, I would suggest the use of some lighter material, cardboard, for example, which, softened by hot water, easily moulds, and when dry and hard forms an admirable splint. It may be applied in this way: A small strip, extending the full width of the back from the lower border of the scapulæ to the most prominent portion of the sacrum, covered with linen, is applied, when softened, over a piece of canton flannel or some such material, while the patient is sitting, care having been taken that during the application the spinal column is erect. A few turns of a roller will secure it in place. I usually cut the cardboard heart-shaped, with the base upward and the apex down. When dry the support will be found complete. The shoulders will rest on a level, the lower borders of the scalpulæ firmly fixed upon the upper part of the board, this position being, I think, most important. The cardboard can be attached to the corset, taken on and off with it, and, as the clothing fits perfectly without the least hint as to what lies beneath, patients will wear it with comfort and willingly for any length of time. But above all things I believe in the daily use of the faradic current, applied to those muscles or groups that it is proposed to strengthen, and to them alone: thus, if the column leans towards the right side, faradize the muscles of the left. This, I believe, is of far greater value than we have been accustomed to consider it, for single muscles can thus be readily exercised to the exclusion of others, and exercise of this kind brings with it increased nutrition, strength, and development in size. With such a

power, when applied with the perseverance it demands, what are we not capable of doing? The aurist will tell you of its use in increasing the muscular tonicity of the smallest and most delicate muscles of the ear. In diseases of the uterus so powerful is its local action, when properly applied on muscular fibre, as to make permanent a position in many cases which has needed for years the support of the pessary. I may almost predict for the oculist its value in restoring accommodation instead of the ever fashionable glasses. It is the daily systematic use of a well-contracting current that is followed by the beneficial result, just as it is the mildest form of continued exercise, and not the spasmodic muscular effort, that makes a man powerful. Recommend your patient, before retiring, to hang by the hands from a horizontal pole for a few moments, to use cold sponging, friction, and, above all, when possible, manage to exercise daily in the open air, which the back-support invites, as the want of it before discouraged. When strength is gradually accumulated, encourage that most healthy and invigorating exercise, swimming, which is never followed by the ill effects so often seen in women from the overstraining of violent walking or horse-back riding.—John M. Keating, M. D., in *Phila. Med. Times,* Feb. 26, 1881.

VASO-MOTOR INFLUENCE IN THE PRODUCTION OF CERTAIN FUNCTIONAL DISORDERS.

There can be no question, I think, that many cases of cerebral derangement have their origin in an altered blood supply, brought about by the action of the sympathetic; and it is only by the light of vaso-motor pathology we can hope to deal successfully with them.

Some persons are the subjects of a naturally weak vaso-motor system, and Dr. Hume, in the *Practitioner* of July, 1879, has very accurately described the distinguishing characteristics of those who are so afflicted. "They have," he says, "a soft, moist eye, a dilated pupil in a blue iris, and a thick, drooping upper eyelid. The nervous system, not well balanced, is

easily disturbed by excitement. The blood vascular system is weak, atonic, as shown by the irregular heart, subject to palpitations and tumultuous action on slight exertion or sudden emotions, the small, irregular pulse, the tendency to dilatations, and eventually varicosities of the veins, and the ready congestion of the capillaries on exercise or alcohol being taken." From my own personal observation I should say that those who are thus constituted require longer rest than other people, and are easily upset by the use of alcohol, smoking, residence in a damp-warm climate, and sexual intercourse. Sexual intercourse especially seems to produce such an excessive amount of nervous exhaustion, that it is necessary we should be able to recognise at once both the symptoms and the cause, and also to apply the appropriate treatment. The chief symptom complained of is a sinking or vacancy at the pit of the stomach, which nothing seems to relieve, not even food; with this there is a feeling of drowsiness, some pain and swimmy feeling in the head, and great irritability of temper. The patient's sleep is heavy, as shown by loud snoring, but it is unrefreshing, and broken by frequent and severe startings or muscular twitchings. On rising in the morning the patient complains of feeling giddy and light-headed; the tongue is dry and coated, and there is a nasty taste in the mouth; the breath is exceedingly offensive (the result of nervous exhaustion); the forehead and the body generally are hot and dry; the eyes look congested. In bad cases the patient will tell you he does not seem able to pronounce his words correctly when reading aloud; or direct the movements of his hands as he wishes while writing, or his legs in walking. In very severe cases I have known complete loss of speech, varying from an hour or so to two or three days, and also of control over the movements, both of the legs and arms.

The treatment of these cases should of course be directed towards controlling the cerebral circulation, and with this view four minims of the dilute hydrocyanic acid should be given every four hours (this has a sedative effect on the brain, spinal cord, and heart). Bathing the head with *cold* water two or three times in the day should also be strongly recommended, inasmuch as it acts as a direct sedative to the cerebral circulation. More than one patient has told me that chocolate relieves

the sinking feeling at the pit of the stomach, and produces a more lasting effect than anything else; but what is really its action I cannot say. Plenty of milk should be taken, but no alcohol. In severe and prolonged cases, when the immediate symptoms have passed off, syrup of the lactophosphate of lime and iron, with small doses of tincture of digitalis and nux vomica, or Kirby's compound phosphorus pills, are to be recommended, together with change to a bracing atmosphere.

I have thought it right to put down these few remarks on paper, as I have known some cases of cerebral exhaustion to be considered as cases resulting from syphilitic disease, and to be dosed with iodide of potassium till recovery seemed almost hopeless.—F. P. ATKINSON, M. D., in the *Practitioner*, February, 1881.

INCIDENT OF PIONEER LIFE.

In 1837, Mr. G. married a young woman, purchased a piece of land in Barry county, built a log house and moved into it. Indians at that time were numerous, and for several months previous to the birth of her first child, Mrs. G. was greatly annoyed and alarmed by their frequent visits to her house.

Fearing evil effects upon her prospective heir, she consulted her medical adviser, this Dr. B., who informed her that her fears were well founded, which opinion distressed her still more. A large child and protracted labor produced a dark purple appearance of the babe, which the doctor informed the family was an "Indian mark," and that if it grew to maturity it would then have the complexion and characteristics of an Indian, and advised that it should not be washed, dressed nor nursed, but laid aside to die.

In pursuance of this advice it was placed upon a loose board in the unfinished chamber, where it remained until the next day, when a neighbor, Mrs. C., mother of the Hon. V. P. C., formerly a regent of the University, called, and hearing the cries of the suffering babe, and learning the cause of the cruel neglect, "*freed her mind to the ignorant charlatan*" upon the enormity of the crime and the stupidity and ignorance he had exhibited, removed the child from its dangerous position and

gave it the attention necessary to save its life. It grew up a beautiful girl and is now the accomplished wife of a respectable gentleman in Detroit.

Another case was that of Mr. R. W., fourteen miles south of Battle Creek. E. H., afterwards convicted of counterfeiting and passing counterfeit money, claimed to be a cousin of President Harrison and a "*natural doctor*," and was employed to attend Mrs. W. in her confinement. He remained with the patient two days to no purpose, and then informed her the reason she was not relieved was that she was about to have twins, one of which was ready, the other not ready to be born. My friend and kinsman, Dr. Campbell, was called. He found a distended bladder which the "*natural doctor*" had mistaken for the "twin not ready to be born." This was immediately relieved with a catheter. The other "twin" was born after a short delay. These were fair specimens of those who at that time practiced the healing art.—Edwin Cox, M. D., in the *Physician and Surgeon*, March, 1881.

EDUCATION VERSUS HEREDITY.

Lyman P. Alden, Superintendent State Public School at Cold Water, Michigan, says: My observation has led me to the conclusion that ante-natal influences have very much to do, ordinarily, with determining the general character and disposition of the child, but that, in the great majority of cases, these influences may be partly or entirely neutralized by education, if commenced at an early period of the child's life, with favorable surroundings, and continued through a term of years. And by education is meant physical, mental, and moral training.

The children of this institution may be divided into several classes. The first class includes the children of respectable but unfortunate parents, constituting not more than twenty-five per cent. of the whole number. Few of this class prove incorrigible or troublesome, unless they have acquired vicious habits by bad associations, which can soon be eradicated. The second class includes those who, though the children of parents one or both of whom may be dissipated, vicious or criminal, are, nevertheless, comparatively fair children. Quite a number

of this class are found who seem to have no moral resemblance to their parents and whose virtues may have been inherited from remote ancestors. Sometimes, too, it is quite noticeable that all of the children of a family will resemble their vicious parents, except one who escapes the operation of the law and proves to be a very desirable child.

The third group includes the children of vicious parents who, in varying degrees of strength, inherit the evil propensities of their parents. This class comprises more than one-third of the entire number. Making all due allowances for the evil influences about them previous to entering the institution, one can not avoid the conclusion that heredity has had more to do with forming their character than environment; for, many even of those who enter the school at quite an early age show marked proclivities towards wrong. And yet the indications are that the majority of this class even can be saved to good citizenship by judicious training, commenced at an early age, and continued through a term of years. Not that the effects of ante-natal influences will be entirely destroyed. The child born with a feeble intellect can never make a man of genius; the one of feeble constitution and pauper proclivities will never become a thoroughly wide-awake, energetic, and industrious man; the child of feeble will-power will find it hard indeed to resist temptation; the kleptomaniac will often need to remember the commandment, "Thou shalt not steal;" and the passionate will fully realize that "he that ruleth his own spirit is greater than he that taketh a city." But these evil tendencies, if not too strong, may be checked in their development so as to entirely disappear in the next generation.

NOTES AND ITEMS.

Index Medicus—The readers and writers of the medical profession cannot afford to let the *Index Medicus* be discontinued for lack of support. It becomes more and more an absolute necessity as the literature of the profession expands. Send on your subscriptions and secure the permanence of this invaluable periodical. Every public library at least should have this among its periodicals.

Dr. Charles W. Dulles who has been the editor thus far of *The American Specialist* formerly the *Specialist and Intelligencer* has discontinued his editorial work on account of the pressure of other duties. We fail to discover any mention of the name of his successor in the pages of the journal.

Quarter Century Celebration—For twenty-five years Dr. Kraus has edited and owned the *Allgemeine Wiener Medicinische Zeitung* which under his direction has secured an extensive circulation and great influence in the world of medical journalism. We congratulate the doctor upon the success he has attained.

The Faculty of Bellevue Hospital Medical College announce that "on account of the lack of support from the profession at large," because they find that the number of applicants for admission to their class is much smaller than it has been of late years, only about half as many having matriculated as had done at the corresponding date last year, they feel constrained to give up the advanced position which they took two years ago; and hereafter the requirements for admission and graduation will be the same as they were before this year.

Medical Legislation in Missouri—Three important bills were introduced in the Missouri legislature during their late session. One was a bill for the establishment of a Board of Health, and included an appropriation of ten thousand dollars for the purpose of carrying its provisions into effect. This bill was passed by the House, but the Senate committee made no report with reference to it. The second bill was one to regulate the practice of medicine, and was similar to that which became a law in Illinois some four years ago. This bill was approved by the committee, but defeated in the House. The third bill provided for the collection of vital, mortuary and social statistics, authorizing the Board of Health to make the necessary regulations for this purpose. It was favorably reported to the House, but no further action was taken.

Influence of House-Plants—E. McClellan, details the observation of a gentleman thirty years old, the youngest of five children, the other four having all died of phthisis as well as the mother and the paternal grandparents. Before his marriage which took place when he was twenty-three years of age,

he had complained of "weakness of the chest and constant liability to take cold." His wife was quite an enthusiast in the culture of house-plants and kept a considerable number of plants in their bed-room and adjoining sitting room. The health of the gentleman has been very good ever since his marriage and the tendency to take cold seems to have been relieved. Dr. McClellan is disposed to attribute his escape from the disease which has been so fatal to his kindred, to the influence of the house-plants in the midst of which he has lived.—*Phil. Med. Times.* Feb. 26 1881.

Gaultheria as an Antiseptic—MM. Gosselin and Bergeron have made extensive series of experiments concerning the antiseptic value of several proposed substitutes for carbolic acid in the antiseptic treatment of wounds.

From these experiments they concluded that the alcoholic solution of gaultheria (wintergreen) is antiseptic almost to the same degree as camphor spirits and carbolic acid (1–40). It has an agreeable odor, is irritating neither to the skin of the patient nor that of the surgeon.

They made two solutions containing the following proportions:

	Strong.	Weak.
Oil of Gaultheria -	5. parts. -	2.5 parts.
Alcohol - - - - -	100. " - -	100. "
Water - - - - - -	50. " - -	100. "

They found that no toxic effect was produced by these solutions nor was there any caustic action. They are a little more expensive than corresponding carbolic acid solutions; and they suggest that in cases where the item of expense must have weight, it is possible to use carbolic acid solution for washing the hands and the instruments, and reserve the gaultheria for immediate application to the wound. They consider the alcoholic solution of gaultheria inferior to none of the agents in use as regards power of preventing putrefaction in the blood and the tissues.]—*Archives Générales.* Jan. 1881.

Obstetrics among the Pueblo Indians—The Pueblo women are more careful of themselves during pregnancy than are those of the nomadic tribes. Midwives attend the women in labor; and as soon as the labor is found to be at hand, they administer a hot tea made from a certain root. For a time the

patient lies upon the floor face downward, a hot stone being placed under the abdomen; the pains becoming more decided she changes her position to a sitting one. The nurse kneeling behind, pulls her slightly back, constantly pressing downwards on either side of the abdomen. The nurse exerts her whole strength in this effort to help the progress of the birth. They claim that they suffer little on account of the efficacy of the tea, of which they partake freely during the labor, and on account of the assistance of the midwife. The heated stone upon which the woman lies at first is kept applied to the abdomen. The child is laid upon a heated white earth and a blanket thrown over it. The umbilical cord is cut with a knife and tied with a string; the navel is sprinkled with hot water and a cloth is laid over the abdomen. This sprinkling is several times repeated and in three days the navel is entirely healed. The afterbirth is awkwardly removed by the midwife; the mother is dosed with more hot tea, and lies down for a few hours, and the next day goes out with her baby. The mother has no farther treatment except washing in warm water to cleanse her, and occasional draughts of the tea already mentioned, to hasten the cessation of the lochia, which ordinarily disappear in four days. A man is never present at childbirth, it being considered very indelicate.

The practice of abortion is well known, but is practiced only by women of no character. The method pursued is simply that of making downward pressure just as is done by the midwife in assisting the natural labor.—*Rocky Mount. Med. Rev.* Feb. 1881.

Trichinæ in the Holy Land.—Biblical scholars will rejoice to find a sound scientific basis for the ancient Jewish prohibition of swine's flesh,—there exist trichinæ in the Valley of Jordan! Certainly hygiene was honored and obeyed under the Mosaic laws. No one familiar with sanitary science can refrain from admiring the simple and practical regulations imposed upon Israel by its great prophet and leader. To the ignorant, many of them seem arbitrary and savoring of priestly meddlesomeness, but the physician will always esteem Moses as one versed in the medical art, and his sanitary rules as in the highest degree rational and necessary. It would be an extremely interesting discovery to make, that in

those early times trichinosis had been actually observed, and its connection with swine's flesh noted. Possibly some mummy of Pharaoh may yet give us a papyrus setting forth in his obituary the danger of feasting upon bologna, or of being too rash in attacking the savory bacon.

Dr. John Wortabet, at Beyrout, sends a letter to Prof. Virchow (appearing in the *Archives*, March 7, 1881) describing an epidemic of trichinosis that occurred in the neighborhood of the sources of the river Jordan.

A wild boar, in fine condition, was shot in that region November 25, 1880, and his flesh eaten by a number of the inhabitants of a neighboring village; some was eaten raw, some only partially cooked. All these persons were infected. The boar's head was sent as a gift to a family elsewhere resident; this part was cooked three times before eaten, and although enjoyed by a number, none were affected.

Those infected exhibited in the third to the fifth weeks, as chief symptoms, edema of the face and extremities, excessive muscular pain, more or less fever, and great itching over the whole body. Every movement was painful. Convalescence from the fifth week on was slow and accompanied with muscular pain, swellings, and great debility. In some cases there was decided relapse. On Dr. W——'s arrival upon the scene, January 1, 1881, most of the sick had left their beds, some few were still very unwell. There were 262 persons affected—men, women and children. Six died. A bit from the biceps of the arm exhibited a great number of trichinæ.

The disease appeared in the most cases about two weeks after eating of the flesh.

The wild hog is common in the designated region, and lives, as do his less interesting kindred in other lands, in the swamps, feeding upon the roots of the papyrus and such small game as may be captured, notably the wild rat, which Dr. W—— thinks sometimes to harbor trichinæ. Trichinæ have been found, *horribile dictu*, in the wild hog of Germany, hence, as Virchow comments, it is not a matter for surprise that his biblical relation should boast of the same deadly inhabitants. Now, it will appear that the American hog can plead notable and ancient precedent for the late unpleasantness. French and German agitators take note.

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ORIGINAL ARTICLES.

CONSIDERATIONS RESPECTING THE MECHANICAL TREATMENT OF HIP DISEASE, WITH ESPECIAL REFERENCE TO THE VALUE OF TRACTION.

BY A. B. JUDSON, M. D., NEW YORK.

A RECENT reviewer, speaking of the treatment of joint diseases, says: "There is no surgeon who has not his pet theory in which a different degree of importance is given to rest, extension, compression, immobility, mobility or expectancy." It is especially true that unanimity is wanting on the subject of hip disease, the mechanical treatment of which has stimulated surgical ingenuity in a remarkable manner for many years. Between the almost purely expectant plan of Dr. Hutchison and an "improved" Taylor's splint, with its provisions for traction, abduction, adduction, eversion and motion at the knee, there is an almost infinite variety of apparatus, each specimen representing the peculiar views of some practitioner, and the entire collection

containing many instances in which different sides in theory and practice are taken by learned and competent men. In such a deluge of theories and methods a brief critical reconsideration of prevailing views is certainly excusable.

The most decided impression which has been made of late years on prevailing thought and practice in this branch of surgery, is due to the labors of Mr. Thomas, of Liverpool,[1] and Dr. Hutchison, of Brooklyn,[2] who, though widely differing in many other points, are united in emphasizing the importance of protecting the diseased hip from the violence incident to locomotion. They accomplish this object by the use of crutches, and by their zealous advocacy of this method have called attention anew to the importance of the subject. It is a matter of easy demonstration that a hip splint furnished with a pelvic band and perineal straps secures protection from the concussion of locomotion. If the pelvic band and the upright portion of the splint are sufficiently strong and unyielding, the patient sits securely on the perineal straps, and the limb is as truly a pendent member as the arm, and as little affected by locomotion as the upper extremity.

A notable point of difference of opinion between the two authorities above mentioned is in the different estimate which they place on the importance of extension (traction). Mr. Thomas calls it "ridiculous mal-practice,"[3] while Dr. Hutchison mentions it as the first indication for the treatment of inflammation of the joints of the lower extremity,[4] and he gives partial expression to a commonly entertained opinion that the pressure exerted by muscular contraction on the articular surfaces is the principal destructive agent in hip disease, and that the primary object of traction is

1 Diseases of the Hip, Knee, and Ankle Joints. By Hugh Owen Thomas, 2d Ed., Liverpool, 1876.

2 Contributions to Orthopedic Surgery. By Jos. C. Hutchison, M. D., New York, 1880.

3. Hip, Knee and Ankle, p. 10.

4. Contributions to Orthopedic Surgery. pp. 8, 9.

to counteract the peri-articular muscles. This view is open to question. It takes for granted what is not yet demonstrated, that reflex muscular action is the only or chief cause of the rigidity of the joint. It admits the existence of a "vicious circle," in which the inflammation increases the muscular contraction, while the muscular contraction aggravates the inflammation, a condition of things very much at variance with the usually benignant and preservative efforts of nature. Further, a consideration of the morbid anatomy of the affection throws doubt on the importance of intra-articular pressure as a pathological element. In the early stages the lesions are found in the cancellated tissue, while the articular surfaces are intact, and yet the reflex contraction of the muscles is perhaps the earliest recognizable symptom. In advanced stages it is not uncommon in the tables of ex-sections to find cases in which the floor of the acetabulum is free from disease. As this part is as much exposed to pressure as the articular surface of the femur, it could hardly escape if pressure from muscular action were a controlling factor. In all the stages the morbid process is occasionally found invading the interior and surface of the femur and the os innominatum at points remote from the articular surfaces and outside of the influence of articular pressure.

But, giving up these grounds of objection and admitting that the rigidity of the joint is due to reflex muscular action, that the muscular contraction and inflammation mutually incite each other, and that the pressure exerted by muscular action is the principal destructive element in the disease, there still remain cogent reasons for refusing assent to the proposition that traction is useful because it lessens the pressure exerted at the articular surfaces by the contraction of the peri-articular muscles. In order to appreciate these reasons it is necessary to consider in turn the two theories which have heretofore been open to the practitioner who would apply traction by means of a hip splint. He makes use of this apparatus either to keep the

muscles counteracted while motion of the joint is permitted, or to keep the muscles stretched until they are unable to contract. There are serious practical difficulties which mar the first of these theories. One is the impossibility of effecting secure prehension of the femur by adhesive plaster applied over the integument and soft parts. This difficulty appears the greater in view of the fact that the muscular counteraction is limited to the deep muscles or to the deeper fibres of the superficial muscles, fibres which cannot be subjected to traction except by direct prehension of the bone in which they are inserted. Another insurmountable objection is the mechanical impossibility of transmitting pressure from the floor of the acetabulum to the ischiatic tuberosity and the rami of the ischium and pubes in all the variations of active flexion, extension, adduction and abduction. The first of these difficulties, insecure prehension of the femur, pertains as well to the second theory, that which implies the stretching of the peri-articular muscles until they lose their contractility. This theory is also open to the objection that it takes for granted the extremely improbable surrender by muscular fibre of its contractility on the application of traction. It is also further open to the objection that the extent of the stretching supposed to be applied to the muscles in this way is so minute, when compared with the immense elongation which healthy muscles undergo in the natural motions of the joint, that it can scarcely be admitted to have any important effect.

Forced to relinquish these untenable premises, what ground is left to the practitioner on which to explain the undoubted efficacy of treatment by the hip splint? Ample ground, and hitherto unoccupied, is at hand in the following proposition: The advantages derived from the traction exerted by the hip splint are due solely to the fact that it secures fixation. Desault recognized the immobilizing power of traction, as is seen in the following instructive passage describing his method of treating fracture of the

femur: "This consists, to speak in general terms, in taking the points of extension, above, on the tuberosity of the os ischium of the diseased side, and below, on the malleoli; in securing the straps, or rollers, destined for making extension, on the two ends of a strong splint, placed along the outside of the limb; and in converting, so to speak, the pelvis, the thigh, the leg, and the foot into one entire and solid piece."[1] Besides possessing, to a limited degree, the fixative power inherent in traction, however applied, the traction of the hip splint has, in addition, the advantages derived from the application of a mechanical device known as the brake. The friction of the perineal straps on the ischiatic and pubic regions retards and arrests motion of the pelvis on the femur, which is the same thing as motion of the femur on the pelvis, in the plane of flexion and extension. While flexion and extension are thus arrested by the hip splint, lateral motion is also limited by the same apparatus. Adduction is opposed by the action of the perineal straps, both of which are on the inner side of the the joint, in such a position that the application of traction by the rack and pinion necessarily forces the limb away from the median line towards abduction. Abduction is opposed by the fact that the apparatus is virtually a retentive splint applied to the outer side of the limb and extending to near the crest of the ilium, the retaining forces being directed from without inwards at the upper and lower parts of the apparatus, and from within outwards at the upper and inner part of the thigh.

It is not believed that the hip splint secures absolute immobility, which, in the case of the hip-joint, is a mechanical impossibility. But fixation, or a reasonable degree of immobility, may be obtained by the use of the apparatus in question. Mr Thomas[2] calls it "a fractional degree of fixation. The fixation which Mr. Thomas aims at is abso-

1 Treatise on Fractures. P. J. Desault. Edited by Xav. Bichat. Translated by Ch. Caldwell, M. D. 3d Ed. Philadelphia, 1817. p. 243.

2 Hip, Knee and Ankle, Loc. Cit.

lute, and compels him to exercise a remarkable ingenuity in order to reconcile its use with the reduction of the deformity. He would keep the joint immovable, and at the same time keep it moving from a bad into a good position. He remedies the deformity by the application of a force "never continuous, but interrupted by a few days of rest after each gain."[1] He says, "the weight of the limb is equal to reducing any angular deformity."[2] His method is that of "allowing the body to become unfolded by mere position."[3] He even resorts to moral suasion, saying that "the limb must be gently persuaded to come back from the erring position."[4]

The fact that the fixation secured by the hip splint is imperfect, or fractional, gives it a peculiar and decided advantage. The condition of a hip to which this apparatus has been applied resembles that found in some forms of paralysis, in which a limb is movable on the application of suitable force, but retains with sufficient firmness whatever position it may be placed in. Fixation, thus secured, is attended with sufficient arrest of motion to promote the reparative process, while it allows timely correction of the deformity in obedience to the unconscious efforts of the patient to put the limb in the most favorable position for locomotion.

I.—THE RIGHTS AND OBLIGATIONS OF PHYSICIANS AND SURGEONS UNDER THE LAW.

II.—MEDICAL JURISPRUDENCE—THE LINK WHICH UNITES LAW AND MEDICINE.

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THEOLOGY, medicine and law are the triune sciences of life. Theology directs us in the salvation of the soul, and

1 Op. Cit., p. 95.
2 Op. Cit., p. 40.
3 Op. Cit., p. 55.
4 Op. Cit., p. 41.

hence our eternal welfare. Medicine preserves our decaying bodies, in which the germs of death are planted with those of life. Law throws around us the safeguards of our lives, our liberties, our property, health and reputation. Together the three sciences embellish, improve and sustain each other. Hence, one should be interwoven with the other, for their separation is their impairment. Theology inculcates our duty to God. The law is founded upon the principles of theology, and he who alleges the contrary has never profoundly worshiped at its shrine. Medicine, properly pursued as a profession, takes as its prototype the Great Physician who healed the sick and raised the dead. Thus pursued, it is loftier in the utility of its performances during our earthly lives than the other two sciences; for law relates, in its administration, principally to property, and the rewards inculcated by theology come after the physician's arts are in futility exhausted, whilst medicine hourly assuages that pain and anguish which, unrelieved, make life miserable.

In a practical way, the writer proposes to state in this paper, (1) what are definitely settled by the courts in the direction of the rights and obligations of physicians and surgeons under the law, and then treat of (2) medical jurisprudence—the link which unites law and medicine.

I.

A lawyer may sometimes be heard to say, he thanks heaven he knows nothing about medical science, and more than one doctor has been known equally to rejoice in his utter ignorance of the law. It is gratifying that such men should, in the language of Franklin: "Have grace enough to thank heaven for anything;" but such an attitude exhibits a stupidity and folly as unpardonable as they are wanton. The confession of both might have been spared, since the fact of the ignorance of that sort of lawyers and physicians is ordinarily painfully obvious.

No physician lives but that he needs to know a good deal

of law; and no lawyer dies but that he had need, in life, in the conservation of his vital powers, to have known much of medicine.

In England neither a physician nor a lawyer can recover in a suit charges for professional services. By an ancient fiction both are supposed to render their services from philanthropic motives; but this rule, even there, does not hold as to surgeons and apothecaries. The result is, that physicians there are liable for their negligence, only as to the extent (hereafter to be shown) to which one is liable who renders gratuitous services.

In this country physicians of all grades can ordinarily sue and recover for their fees, and are liable for negligence, as are surgeons in England. A physician or surgeon attending, in this country, a patient gratuitously, is liable to such patient only for gross negligence—that is, the want of, and injuries arising from the neglect of, slight care and diligence. Nevertheless, as his duties are related to the preservation of human life, it is often gross negligence in a physician to fail to give to his gratuitous patient that attention which would be expected from a paid physician. Because these gratuitous services are often rendered by young and inexperienced physicians, a presumption arises in a law suit because of negligence in rendering them, that one who does so render them is not possessed of great skill, and was not supposed so to be by the patient. But this presumption may be overthrown by proof; and in all actions of this sort the physician must be judged by the standard which he led the patient to believe he had attained. If he has done nothing to mislead the patient by making no representations, his responsibility will be measured by the degree of skill which he is proved to possess.

A physician or a surgeon can, by agreement, undertake to perform a cure; and if he does not perform it, he cannot recover for his services. But the law supposes no such contract from his mere employment professionally. On the contrary, the law does not esteem a physician in his prac-

tice as an insurer of a cure, nor is he prevented from recovering ordinarily for his services, whether the patient is or is not cured. In the absence of an express stipulation to the contrary, the law construes his employment to treat a case of disease as simply implying a contract on his part to treat the case with reasonable diligence and skill; and if he does this, he is entitled to a reasonable compensation for his services, though nothing was said in regard thereto.

The general rule of a physician's liability at law is this: If he attends for, or in expectation of, a fee, he is liable for such a want of ordinary care, diligence or skill on his part as leads to the injury of his patient. To render him liable, even in a civil action for damages, for negligence or want of due care or skill, it is not enough that there has been a less degree of skill than other medical men might have shown, or a less degree of care than even the physician himself might have bestowed; nor is it enough to render him liable that he acknowledged some degree of want of care. There must, to fasten the liability for damages upon him, have been a want of competent or ordinary care and skill, and the lack of both to such a degree as to have led to a bad result. Ordinary care has been by the courts thus defined: "That degree of care which persons of ordinary care and prudence are accustomed to use and employ, under the same or similar circumstances, in order to conduct the enterprise in which they are engaged to a safe and successful termination, having due regard to the rights of others and objects to be accomplished." (8th Ohio, 570, 581.)

Nevertheless, a physician or surgeon is bound not only to use such skill as he has, but to have a reasonable degree of skill. He is further bound to use the ordinary care and skill and judgment of members of his profession.

The law does not countenance quackery; although it does not require the most thorough education, or the largest experience, the medical profession, under the most favorable circumstances, affords; yet it does require that

an uneducated, ignorant man shall not, under the pretense of being a well qualified physician, attempt recklessly and blindly to administer medicines or perform surgical operations.

Moreover, a person not qualified, as not being a regular medical practitioner, but assuming to be, or to practice as such, and undertaking to treat another for a disease, is liable for an injury caused by ignorant and improper treatment, by which the patient is rendered worse instead of better, and is injured by the use of improper medicines he administers. Nevertheless, if the practitioner frankly informs the patient of his want of skill, or the patient is in some way fully aware of it, the patient cannot complain or take advantage of the lack of that which he knew did not exist.

The law recognizes a varying standard of professional skill among physicians, according to the circumstances surrounding them. This standard may be different in the same state or even in the same county, for example, in country towns and in unsettled portions of the country, remote from the cities, the physicians, though well versed in theory, are rarely called upon to perform difficult and intricate operations in surgery, and therefore do not enjoy the greater opportunities for daily observation and practice, which large cities afford. It would be unreasonable, and the law does not expect from one in such circumstances, that high degree of skill which an extensive and constant practice in hospitals and large cities, would imply a physician thus surrounded to be possessed of. A physician, though inexperienced and unlearned may, in some circumstances, undertake such difficult case or operation, and in such case he is bound only to use the best skill he has, for the law sensibly recognizes that many persons would be left to die, if irregular physicians were not allowed to practice. Notwithstanding this rule, yet if a person not of medical education, where professional aid can be in time obtained, undertakes an operation, or administers medicine which has a dangerous

effect, and thereby occasions death, such person is guilty of manslaughter.

No particular system affords an exclusive test of skill, and the homeopathic physicians stand upon an equality before the law with allopathic practitioners. But one who professes to adhere to a particular school, must come up to its average standard of qualifications and skill, and is, by the law, judged by its tests and in the light of the acquirements of his school at the present day. Hence this is a proposition of law. A physician who would now practice the reckless and indiscriminate bleeding, which was in high repute forty years ago, or should shut up a patient in fever, and deny all cooling drinks, would find the old practice a poor excuse for his imbecility. He is required to keep up with the average progress of his profession.

If a professional homeopathist should violate all the canons of homeopathy, he would be bound to show some very good reason for his conduct if it was attended with injurious effects. Such a case came up in my practice several years ago. A homeopathic physician prescribed for the wife of my client, five drops, several times a day, of Fowler's solution of arsenic continuously for three consecutive months. Her system became permeated with the poison, and she lingered, much as did the recent murdered man Cobb, in New England, and died shortly after his services were dispensed with. The physician afterwards sued the husband for his services. Among the defenses made in behalf of my client was the one that the treatment of the homeopathic physician was not only in defiance of the rules of his school, which reprobates the administration of Fowler's solution of arsenic in large doses of five drops continued uninterruptedly for more than thirty days, but that the treatment being so grossly negligent as to cause death, not only was the physician not entitled to recover therefor, but was liable to the husband in a civil action for damages for the unnecessary killing of his wife, and also answerable to the criminal law for manslaughter

in her untoward taking off. With the foregoing facts disclosed at the trial, and with the solution analyzed by Professor Chauvenet, of St. Louis, and the result in metallic arsenic displayed on porcelain discs at the trial of the cause, I need hardly add that that physician did not recover his professional bill. He, however, was one of those who, in that case at least, was taught the importance of knowing some law applicable to his professional obligations to his patients; for, anticipating its speedy application to him in another legal proceeding, uninvoked by his deceased patient's husband, and which promised to be distasteful to him, he speedily left our county for our county's good. I am persuaded, however, that he will administer no more Fowler's solution of arsenic in such repeated doses.

The state of health of the patient may have much weight in determining whether ordinary care and diligence have been used by the attending physician. What might be deemed ordinary care in some circumstances, would be gross negligence in others. A disease known to be rapid and dangerous, will, under the law, require a more instant and careful attention and application of remedies than one comparatively harmless, and requiring only good nursing.

So, beyond the manipulation of a fractured limb, a surgeon has often to contend with very many powerful and hidden influences, such as the habits, hereditary tendencies, vital force, mental state, and local circumstances of the patient. These will often explain his ill success. Yet he is bound to inform himself of these facts so far as they would likely influence, in the management of the case, the prudent physician; for example, a physician about to administer an anesthetic, is bound to inform himself as to the condition of the patient's heart, lungs or other organs, which, if diseased, would warn a prudent physician against the administration of that beneficent agent.

A physician is not answerable for the errors of an enlightened judgment, but he is not permitted to interpose his judgment contrary to that which is settled in his pro-

fession. He must apply, without mistake, what is settled by the learning of his school. It must not, however, be forgotten, that it is the duty of the patient to co-operate with his physician, and to conform to his proper and necessary prescription, but if he will not or under the pressure of pain, cannot, his neglect is his own doing or misfortune, for which he has no remedy at law to hold his physician responsible.

The particular nature of the services which a medical man undertakes to render, often makes it his duty to continue them long after he would gladly cease to do so. He may, no doubt, decline absolutely, when first called upon to take charge of a case; but having once begun the task, he cannot abandon it as freely. Even if his services are gratuitous, he must continue them until reasonable time has been given to procure other attendance; and if he is not attending gratuitously, he has no right to desert a patient without a reasonable cause before the end of the illness which he undertook to treat.

II.

Medical jurisprudence is law applied to medicine. It naturally embraces the Pisgahs of the two sciences. A science is so called because it is never fully acquired. We go on learning, until we reach the highest realm of knowledge,—knowing ourselves,—knowing in other words how little we do know. To succeed in a little we must aspire to much, for "in great attempts 'tis glorious e'en to fail." We shall then be tested not by our own perfections, for that is not the lot of man, but by our success in overcoming our imperfections.

That medical jurisprudence is yet a comparatively undeveloped science, no one who has given to it but a cursory examination will deny. The great body of the law which controls human action is to be found in the vast repositories contained in the reports and text-books purporting to detail the rules of the common law and equity jurisprudence.

The work of legislatures is not to adopt rules which are imbedded in these two departments of jurisprudence. The modern codes are the work of legislative bodies, but their enactments do not afford rules for the adjustment of one-half the concerns of mankind, when resort is made to the law. For the disposition of the great preponderance of those questions which relate to our lives, our fortunes, our liberties, or our honor, we turn to the common law and to equity. The former embraces those principles, usages, and rules of action applicable to the government and security of our persons and property which do not rest for their authority upon any express or positive declaration of the will of the legislature; and it derives its origin from the will of the people through long established customs based upon and deducible from the needs, necessities and situation of the people.

In other words, to fully comprehend the scope and purpose of the common law, and to survey its philosophy, one must gather it from a philosophical survey of English and American history. Through such a survey we will find that almost every rule established by it has been one founded upon the commercial or personal needs of the people who are protected by it, whilst the system of equity jurisprudence, springing into existence from the same circumstances and deriving its origin from the same source, has sought to give relief where the common law by the universality of its rules has proven deficient to afford justice in stated cases; and without being toned down by an auxiliary jurisprudence, injustice would often have been done innocent and injured parties by the strict enforcement of a rigid rule of the common law.

What is the relation of physicians to the administration of this vast volume of the common law and equity? The needs or necessities of a people, or of a nation, are to be answered by the adjustment or adoption of such rules as are deducible from such needs and from the average intelligence and morality of those who are called into the service of the public in settling the controversy at issue.

If it be a question of medico-legal attributes, the enlightened judgment of your profession or of mine, if it understands the situation to the degree of being experts on the subject of the matter in hand, must settle the controversy in the end. In a thousand instances what was once a rule of law, for the time being, has been hewn away and discarded,—(often by the courts themselves, and if they were slow, then by the legislatures in changing the so-called rule of law,) because upon an investigation of the facts and reasons upon which it was based, it was found that it neither responded to the public needs, growing only out of such facts or that they had not received an enlightened survey and philosophical application. The ceaseless and advancing standard of a comprehensive appreciation of the true facts of the case and of their relation to the situation and needs of the people and to civilization, has, like the sweep of a mighty river, worn away and overwhelmed countless rules of law, civil as well as criminal, which had by their unbending application thrown themselves athwart that situation and needs. Let us cite but two familiar instances. The great body of the common law rules in force in this country now, and heretofore, have been borrowed from the mother country,—England. In that narrow and circumscribed island (typical, however, of a wise and a mighty nation,) the source of the water courses is supplied by the ebbs and flows of the tides of the ocean. A river or a creek scarcely exists there susceptible of profitable navigation, but that, as far as the vessel's prow can ascend the waters thereof, they are sent in and drawn out twice in twenty-four hours by the tides of the sea. So when the courts of that country came to decide questions of admiralty and maritime law, and in doing so were led to determine what was or was not a navigable river, they adopted the rule that navigable rivers were those in which the tide ebbs and flows, while rivers not navigable embrace those in which the tide does not flow and re-flow. It is thus seen that this rule in England was predicated upon the actual situation and condition of the rivers there.

Our forefathers in bringing with them for their guidance the rules of the common law prevailing in England, settled upon the Atlantic coast where the rivers were likewise affected by the ebb and flow of the tide of the ocean, and they naturally, in all similar questions of law pertaining to them, followed the legal rules pertaining to the subject prevailing in England In the process of time when the vast north-western territory, Virginia gave to the Union, and the vast region known as the Louisiana purchase were carved into states and territories, and became peopled with teeming millions whose commerce was largely carried on upon the mighty inland seas, such as are the Mississippi, the Missouri and the Ohio rivers, the old rule was found to be inapplicable to their situation. For a long time the courts, however, clung to it, but the needs and the necessities of the people of this great Mississippi valley so pressed upon them for a readjustment of the rule that finally and without the aid of legislation they reversed it and in responding to them they hold, as is now the rule, that where a river is in fact navigable it is in law navigable. Here the courts under a fundamental principle of the common law of applying proper remedies to the exigencies of such new cases and circumstances as may arise, by a commendable elasticity, gave to the western and southern rivers the protection of admiralty jurisprudence applicable to navigable rivers.

Originally, at common law, and indeed in some of the states of the Union, before a party could be acquitted upon the plea of insanity, after he had slain a human being, the test in determining whether or not such insanity existed at the time of the killing, was dependent upon ascertaining whether the then accused had the ability to discern the difference between moral good and evil, or, in a word, right and wrong. An army of insane men have been hung by circumscribing the test of insanity to this narrow compass. And yet that test was one adopted years ago by your profession in determining if insanity existed.

The old lawyers and judges but borrowed it from the old doctors. Later researches in medical science have in a great measure eliminated and mitigated that and other rules laid down by former judges and law writers, and herein has legal science been enlightened on its advance by the genial learning of an advancing medical science. Now, it is conceded, that insanity is a disease of the brain, superinduced through disordered functions of the body, and that in discovering its existence or absence no one isolated fact is conclusive, but that it must be diagnosed, in all the numerous divisions into which the disease runs, according to certain general rules, the establishment of which is the result of the researches of modern medical science; and that in the application of such rules to cases at law, where insanity is made the issue, all facts and circumstances pertaining to condition, conduct and circumstances of the accused, may contribute as matters of fact to determine the question of his insanity.

Again, murder in the first degree is defined to be,—the wilful, deliberate and premeditated killing, by a person of sound mind and discretion of a reasonable creature, in being, in the peace of the state, and with malice aforethought, express or implied. The analysis of this definition, will immediately demonstrate, that without deliberation, and premeditation there can be no such murder. In a word, if the alleged murderer is in no condition of mind to be able to deliberate upon any subject, to say nothing of the killing of a fellow-being,—if he from lack of will-power or in the utter prostration and chaos of his intellect, is unable at all to deliberate, it is not murder, because of the absence of deliberation and premeditation, which are the essential requisites which go to make it. Let us take now the case of a man so beastly drunk as to be totally unable to entertain any deliberation or premeditation, and suppose him to have become thus intoxicated from no motive to injure any one. Suppose he, in this condition, kills another,—is it murder in the first degree as defined? A

majority of the courts say it is, and yet how can it be murder when there is no premeditation or deliberation on the part of the slayer. Where is the logic of this position? The advanced authorities however, maintain that although drunkenness in point of law, constitutes no excuse or justification for crime, still, when the nature and essence of the crime, (as in murder in the first degree), are made to depend, by law upon the peculiar state and condition of the criminal's mind at the time and with reference to the act done, drunkenness as a matter of fact, affecting, as your science teaches us it does, such state and condition of the mind, is a proper subject for consideration and inquiry by the jury in order to enable it to determine, if the act proceeded from sudden passion or from deliberation or premeditation. The question in such an inquiry is: What was the mental status of the accused at the time of the act and with reference to it?" To regard the fact of intoxication as meriting consideration in such a case, is not to hold that drunkenness will excuse crime, but to inquire whether the very crime which the law defines and punishes has been, in fact, committed. Who believes that, if logic is reason, or that if science proves, as it does, the annihilation of the mental capacity of a doubly drunken man to deliberate or premeditate, courts will long hold him guilty of murder in the first degree, if he gets into that condition from no previously formed purpose to kill, but in it blindly takes the life of a human being? And why will they not? Because to hang one for drunkenness, as is the case if a drunken man without deliberation and premeditation kills another, is an excessive punishment, at which human nature revolts, and because in the end, if the definition remains as it is, the intellect of courts cannot stultify themselves, (reprobate, as we do drunkenness)—by pursuing a process of solecism, which is not based upon principles of reason, logic, and wise common sense, as is the law.

The enlightened relation of the medical profession to the legal profession, in solving such questions of medical juris-

prudence as the foregoing, and all others, is this: that by bringing into the forum of the law the results of the best and most certain thoughts, researches and diagnoses pertaining to the entire realm of medical science, physicians engraft that much medicine upon law so as to improve its stock, and thus infuse into it the medicine, which is to purify, strengthen and improve its administration. When by superior and patient study learned physicians have done this, they have not only made law, but have advanced the whole tide of civilization, for next to the exalted or debased position and condition of woman, no barometer is so true in determining the relative advancement or retrogression of a nation in any epoch of history, as a survey of its laws. They represent its literature, the progress it has made in the alleviation of the helpless, the advancement in its arts and sciences, as well as in commerce and war.

The subject, then of medical jurisprudence is cosmopolitan in its character and importance. And yet, comparatively speaking, how few lawyers as well as physicians know aught about it. The former may know the law, but in their ignorance of all medicine, they as the physicians, in their ignorance of all law, are devoid of that dual knowledge which goes to make up the union of the two sciences known as medical jurisprudence. This is the reason why so comparatively little of the great light shed upon the subject of mental disease, and its relations to human responsibilty during the last century, has fused itself into the dogmas and precedents of the courts. We speak but the words of truth when we say, that the legal profession generally and especially the judges, have so little practical acquaintance with insanity, that their minds are unable to comprehend the vast truths which are familiar to the truly scientific physicians and alienists who have during the last century done so much to reduce its study and application to certain fixed rules. On the other hand we are equally frank in stating, that, as a class, physicians are as ignorant of law as lawyers are of medicine. What does the hum-drum

lawyer know of the brain, of the nervous, muscular, or circulatory system, of the membranes or coats of the stomach, of the heart, pericardium, tissues, liver, lungs, viscera, etc? Comparatively nothing, either in their separate or joint structure, to say nothing of their influence upon each other as well as upon the entire system. How, then, can such a man try questions of murder, involving life,—or questions of insanity, fatuity, senility, or idiocy—often affecting, as they do, life, and oftener controlling the disposition of property by will, or the validity of contracts the most solemn and important. How is it with doctors, ordinarily? In cases involving questions of insanity, epilepsy, apoplexy, mania-a-potu, anatomy, surgery, palsy, toxicology, botany and chemistry—how is it, I ask, with doctors when they are called into court to testify? We have seen them, for the most part, come into court, standing upon their guard, against what they thought were the tricks of a sister profession; and instead of relying upon the correctness and fullness of their knowledge, they were distracted by the desire to avoid an appearance of ignorance upon any matter involved such inquiries. Who ever heard one of this class say he did not know? They speculate as though life and property were not dependent upon their speculations. What we have said is not certainly to offend the whole medical profession nor to treat cavalierly my brother lawyers, but to show the necessity of a knowledge of medical jurisprudence. If the two professions are wholly separated from each other, medicine and law leave a gap "for ruin's wasteful entrance." A physician who knows nothing of law, and a lawyer who knows nothing of medicine, are both deficient in the true requisites of their profession.

It is not to be expected that physicians will desert their profession to attend courts to learn the application of the legal rules by which medical testimony is governed; nor is it to be expected that lawyers in full practice should abandon their offices to attend upon the instructive lectures the medical colleges afford. An hour a day devoted

to chemistry, surgery and anatomy, with the incidental reading of works on medical jurisprudence, pursued for five years would give the lawyer all the requisite drill to enable him to quickly sieze the means to be equal to the occasion of trials involving questions verging into the zone of both professions; and a like time so spent by physicians with such works and with the latest editions of Walker's American Law, Bishop's Criminal Law, and the first volume of Greenleaf's Evidence,—(works that are free from undue technical refinements) together with the latest and best works on medical jurisprudence, and especially those of Wharton and Stille and Taylor, would, with special study of cases enable them to make a fair showing as experts on the trial of causes in the courts. As such experts, physicians are permitted to give their opinions in evidence upon the trial of causes in court, because they are men of science in that they are instructed by experience. Opinions of medical men are thus constantly admitted as to the cause of disease or death or the consequences of wounds, as to the sane or insane state of a person's mind and as to other subjects of professional skill. Such opinions are admissible, though the witness founds them not on his personal observation of the patient but on the case itself as proven by the other witnesses on the trial and stated to him hypothetically. A question may sometimes arise as to whether, as experts, physicians are compelled to give their opinions without proper compensation. It can not be said that this is definitely settled. In a late case in Alabama, (Ex parte Dement, 6th Central Law Journal page 11), it was, by the Supreme Court of that State, held that a physician, like any other person, may be called to testify as an expert in a judicial investigation, whether it be a civil or criminal case, without being paid for his testimony, as for a professional opinion, and upon his refusal to testify, is punishable for contempt. On the other hand, a later case decided by the Supreme Court of Indiana (Buchman v. The State, 6 Central Law Journal, page 22), held that physicians and

surgeons, cannot be compelled to give professional opinions, as experts, in courts of justice, without receiving extra pay for such services, beyond the ordinary witness fees, and upon refusal to testify, they cannot be committed for contempt. A witness is bound as a matter of public policy to testify as to facts within his knowledge, or which have come under his observation, concerning the issues involved in the particular case. To do this is but performing a duty we owe in the maintenance of public justice, whether it be exerted in civil or criminal causes. But there is a wide distinction between a witness testifying thus simply to facts he, in common with all the world, may have observed without labor, and a witness selected by a party and subpœnaed to give in a court of justice his opinions on a subject with which only from a long course of study and at a great expense he is conversant, and which, like all educated brains in professional men, may be his principle capital in his business. To thus, for such a purpose, require a physician or other expert to attend, day after day, a court of justice and give his opinions, and the benefit of his researches, for the use of the public, in the prosecution, even by the state of malefactors, for the public good, without adequate compensation is not only imposing too great a burden upon one class of people for the benefit of the whole, but savors too much of that taking of private property for public uses without just compensation, which our constitutions prohibit. It is true every citizen owes a reasonable part of the use of his time and means for the good of the public of which he is one: but, when the burden is unequally imposed upon one man or upon one class, the injustice of the imposition, like unequal taxation, becomes oppressive, and relief from such oppression should, in case of doubt, as is the present question, be afforded by wise legislation on the part of all the states, as is done in a few of them, in the form of providing for the payment of an adequate compensation to experts when requested to give opinions which are the result of laborious and expensive study. A step in this

direction, has been taken in Missouri, in providing, as is done, that when a physician or surgeon, shall be called on by the coroner, or any magistrate of the county, acting as the coroner, to conduct a *post mortem* examination, the county court of the county shall be authorized to allow such physician or surgeon to be paid out of the county treasury, any sum as a fee not exceeding ten dollars.

The proper way to settle this question in each state where there is no adjudication upon it by the court of last resort is for some physician to refuse in some of the lower courts to testify as an expert without being properly compensated; and if thereon committed to jail for contempt of court in refusing to so testify, to bring the matter before the court of last resort by a petition for a writ of *habeas corpus* to inquire into the legality of the imprisonment. If a favorable ruling should be made by that court, the legislature of its state would from necessity soon pass a law giving to experts just compensation for their testimony. In civil causes it should be taxed as other costs in the case, and the losing party in the litigation thus be compelled to pay it, but in criminal cases, in case of acquittal, or upon the conviction of an insolvent defendant, the state should pay the fee.

The views of drones often deter physicians from the study of medical jurisprudence by the argument that no man can be a lawyer, a doctor and a divine, and that study must have an especial, exclusive and sole end in view. No single branch can achieve real greatness when it is singular in its application. This may give one distinction in his special calling, but there is a wide gulf between distinction and real eminence and true greatness. It is only by a union of all our powers that the mind is wrought to its greatest achievements, and it is so constituted that we can, if we labor to do so, master more than one subject. We do not mean that we should spasmodically and flippantly jump from one subject to another and thus exhaust none, but by interweaving one or two cognate sciences in the study of our

special one, the mind instead of being exhausted by such labor is invigorated. It is like an occasional change in diet, which we all know is refreshing as it is strengthening. Nor is this all. Proficiency in every additional branch of science widens the scope of our mental horizon, brings us into contact with a larger and brighter circle of acquaintances, secures us new patients and new adherents, and gives us new and enlarged claims upon the public attention and patronage. In a word, it enables us to climb in life; and what is life worth but for the good uses we make of it, and the honors and success we achieve in it? The clergyman, lawyer or physician who has no higher professional goal than simply to wring from his profession an easy subsistence, will never achieve more, and will always grovel in the lower depths of what should be to him a continuously progressive calling. If he carries with him, into his professional life, the higher view of it, he will get out of it far more readily a good living than the pursuit in it of that living alone.

It should never be forgotten by the physician when called as an expert witness, that his obligations in this capacity are in proportion to his skill and character. Upon his opinion it frequently happens that every thing valuable in life and indeed that life itself may depend. He should therefore not allow the general circumstances, such as the moral or legal bearing of the facts in the case, to influence his medical opinion, for he has no right to give any other opinion in the case than that which is directly within the scope of his scientific investigations.

He should profoundly study from every point of his scientific compass the questions involved in such investigations and in thus reaching a calm, unbiased and intelligent opinion, he should stoutly maintain it and give full and ample reasons, as he then can, for the faith that is in him.

The condition of the scientific witness who gives any other opinion in a law case, far reaching in its consequences as it is calculated to be, is awful. In the technical

learning of his profession when applied to the settlement of legal controversies, judges, lawyers and juries ordinarily, in declaring and applying the law to it, rely upon the physician. A false or ignorant opinion from him under such circumstances is fraught with consequences fearful to contemplate.

Instead, for instance, of giving an opinion that poison or wounds did, in fact, produce death, unless the fact is absolutely plain and conclusive, why not declare that they are sufficient to produce it, leaving the jury and not you to find if death was so produced? One cause of death may exist with another at the same time. A case exists in the books of the detection of arsenic in the stomach of a deceased person sufficient to produce death, and yet upon a careful post mortem examination it was found that the individual had died of apoplexy, a result entirely disconnected with the charge of murder.

Administering poison with intent to kill is a felony, but if death does not result from it, it is not homicide.

Above, all, if physicians are called as medical experts, let them remember that the effect of their testimony must come through the ears and understanding of the court and jury. If they do not understand them, no ideas are conveyed, or the ideas the physicians intend to convey are liable to be perverted to some unjust and unreasonable result. They should avoid this by the explicit communication of their views. If they are compelled to use Latin terms then they should translate them into plain and good English. Denominate water "water," and salt "salt," and potash "potash," and thus refrain from describing things through a professional vocabulary.

The effected jargon of the schools, when promiscuously used, is ordinarily intended to hide our ignorance.

It should, in courts, be eschewed by physicians if they wish to be fully comprehended, and to avoid misinterpretation by ignorant and sometimes vicious counsel.

LACERATION OF THE CERVIX UTERI.

By M. Yarnall, M. D., St. Louis, *Adjunct to the Chair of Gynecology, Missouri Medical College, St. Louis.*

THOSE original thinkers who suggest and perform new operations, who make the great discoveries that lead to the rapid advances in our science, are oftentimes doubtless astonished and distressed at the abuse as well as the use that is made of their suggestions. They cannot, of course, be held responsible for the indiscretion of their followers who may bring an admirable surgical procedure into disrepute.

How many hundred, probably thousand times have sections of the cervix, especially the bilateral operation, been performed unnecessarily; how many sponge and sea tangle tents been used when the patient would have been better without them; how many lives sacrificed by unnecessary gynecological operations; and that too, in cases where the originator of the method, with all the enthusiasm that a discoverer has for his pet creation, would never have dreamed of operating.

New conceptions are a boon to the enthusiast; they not only enable him to work in fresh fields, but to operate right and left. Directing the attention of the profession to laceration of the cervix and the operation for its cure, opened an immense field for the ardent gynecologist. All women who have borne children, or nearly all, are subjects. Nearly all women marry, (or at least all who can) and nearly all who marry have children. A lacerated cervix is the consequence; the more children the more lacerations, consequently the more operations.

Gynecology has its fashions. The votaries of the last rage for operating indiscriminately for lacerations of the cervix cannot only restore the integrity of the neck in cases

produced by parturition, but in those caused by the once extremely fashionable, but now neglected bilateral section. Those who most ardently advocated the latter are doubtless the strongest advocates for the frequent performance of the former.

I would not have it understood that I am opposed to operating for laceration of the cervix uteri when it is lacerated to the extent necessary to justify interference. Cases of the kind frequently present themselves to the gynecologist. Not only must Dr. Emmet be thanked for calling our attention to this injury, but for the admirable method he devised for operating, which was entirely original, and, I believe, has not been improved upon. While I rejoice in common with the rest of the profession, I trust I will be pardoned for condemning its performance in the large proportion of cases that has been suggested by some observers.

It is rare indeed that labor occurs without more or less laceration, but the laceration must be considerable before it becomes a pathological condition, and I am disposed to question the propriety, as a rule, of any operative procedure for the repair of such lacerations during the puerperal period, say for at least three or four months after parturition. If there be exceptions, they are rare indeed, for the simple reason that involution so changes the size of the uterus that what may seem a most formidable injury, will be almost imperceptible a few weeks later. This was most happily illustrated in a memorable case in my practice some years since.

Mrs. C. was six days in labor. Several medical gentlemen were called in consultation during this long period, among whom I may mention Dr. T. L. Papin and Dr. Cooper, at that time of St. Louis, now of Boonville, Mo. The os was dilated to the extent of between one and a half and two inches in diameter, and would yield no more. Drs. Papin and Cooper, with myself, concluded that she would die, undelivered, if we did not act. We decided to drag the head through with the forceps rather than incise the os, as

being less dangerous, as we had had experience in former cases of a somewhat similar character. The forceps were applied with difficulty through the small opening, and the head was dragged through the imperfectly dilated os, which was extremely lacerated. We were conscious that such would be the result, and that an operation would be necessary to restore the os to its original integrity, if the patient was so fortunate as to survive. She lived, and strange as it may seem, and as seemed to us at the time, the laceration appeared small when complete involution had occurred. The eversion was not so marked as was anticipated, and the result of the operation for the restoration of the neck was happy. Just after labor the laceration seemed appalling, but in a few months it had almost disappeared. In many cases it heals completely, involution so reduces injuries of this character that while it is possible that some cases might with propriety be operated upon immediately after parturition, yet they must be so rare that I think it would be safe to condemn this proceding entirely.

I believe it will be generally conceded that more or less laceration occurs in every labor, and that a slight laceration is not an injury worthy of consideration. If such is true, it is our duty to only interfere in those cases where there is trouble produced by the extent of the injury. The extensive female clinic of Dr. T. L. Papin, at St. John's Hospital, has given me an opportunity to examine the proportion of cases where lacerations were great enough to classify them as proper ones to be benefited by an operation.

Not more than one in twenty or thirty would, under any circumstances, be justifiable cases, but one in fifty would be a more conservative and proper estimate. It will be remembered that this estimate is made upon gynecological patients, and not from matrons indiscriminately. Hence it would be difficult to tell the exact number of cases of lacerations of the cervix among child-bearing women generally, in which operations are really required. Some cases are

so evident that there can be no question as to the propriety of closing the vent surgically. In such cases not only are the discharges acrid, but the patient is often made sterile. Then come the minor cases with less copious and acrid leucorrhea, such as would commend themselves as operable cases. But the slight lacerations are not injurious, and should be let alone.

ANEURISM OF THE AORTA.

A Clinical Lecture Delivered by P. Gervais Robinson, M. D., *Professor of Practice of Medicine in the Missouri Medical College.*

Reported by S. T. Robinson, M. D.

I BRING before you to-day, gentlemen, a patient whom you have not before seen, and whose case is one of much interest, inasmuch as it presents a good example of its kind, and furnishes an excellent lesson in physical diagnosis. Study well one of these cases, which at first may appear complicated, and you will have very little difficulty in recognizing them in the future.

I will say at the outset that the case is one of aneurism of the chief artery in the body, and feel sure that you will give the the case the attention it merits. I will first inquire into his history. He tells me, in answer to my inquiries, that he was born in England; is thirty-nine years old; has been a seaman most of his life, but for the last five years has been engaged in pumping out coal boats, very laborious work; is married; has always been temperate; has never had syphilis; has had two accidents; some years ago fractured his chin, and three years ago broke two ribs in axillary region.

He first noticed something wrong about a year ago, but thought it only a cold for which he was treated. Shortly

after he had pains in his right chest and arm; then followed attacks of giddiness. About this time he went to Dr. Bemiss, of New Orleans, whom we all know by reputation at least, and who told him he had an aneurism. At that time no tumor could be seen, nor could any pulsation be distinguished. Dr. Bemiss told him that, with great care of himself, he might possibly do well.

He came here in February; was very sick at the time with a cold and severe neuralgic pains. All of his pains have been on the right side. Has suffered a great deal from shortness of breath, the attacks being paroxysmal in their nature. Has had no swelling in the arm. Has never lost the use of his voice, nor has he been affected with hoarseness, but at times has had some difficulty in swallowing.

These are the essential symptoms; such as are subjective in their nature, and may all be attributed to the pressure exerted by the growing tumor. Let us now analyze these symptoms and see how they are produced.

He first thought that he suffered from a cold, but undoubtedly it was a catarrh produced by other than the usual causes. The tumor pressing upon some of the bronchi caused a hyperemia of its vessels, or effected in some way by its growth a disturbance of the vascular supply at that point, both as regards quantity and regularity of flow; hence, a localized bronchitis was set up at various times. Often the significance of this symptom is overlooked, but there is one rule to guide you against error. Whenever you have a unilateral bronchitis, you may be certain that it is the result of some pressure, or other local cause, exerted within the thorax. Indeed, the very fact of its not existing bilaterally, but only on one side, would suggest some special causation.

Next there is the dyspnea. You can readily understand how this gradually growing tumor could encroach upon and diminish the lung capacity; and that, as the air space becomes smaller, any slight but unusual exertion

would call for a greater quantity of air than the diminished lung could afford. Or should the pulmonary branches of the vagus nerve be pressed upon, dyspnea, paroxysmal and neurotic in origin, would necessarily result. So also are the pains explained, neuralgic in character, and which he says shoot through the right upper chest and down the arm. They result simply from pressure on the intercostal nerves and those going to form the brachial plexus.

This patient has not had any difficulty of speech or hoarseness. The recurrent branch of the pneumogastric supplies, as you are aware, the muscles of the larynx. Should the function of this nerve be interfered with by injurious pressure, hoarseness, various degrees of difficulty of speaking, or even total aphonia might result. He has not had any of these symptoms, but has sometimes experienced a difficulty of swallowing, so that, undoubtedly, there must have been some pressure in the direction of the esophagus; some slight dysphagia. Hence it is that in doubtful cases an examination of the larynx is very valuable in diagnosis. The mirror in such cases would show that the cord and muscles on the affected side do not respond to the will of the patient, and that a loss or alteration of voice results.

We next have to consider the physical signs, and here I would premise that often they afford us but little help. As their availability depends on the direction in which the tumor grows, it is easy to perceive how little of a positive nature can be ascertained from a physical examination if the aneurism extends downwards, backwards, or is overlaid by surrounding organs—certainly, at least, not until the case has progressed to a great development. Very often the subjective symptoms may be good, but still no physical signs of importance can be discovered until, perhaps late in the case, absorption of the vertebral column is evident. It is in those cases, as in the present instance, where the aneurism projects anteriorly or antero-laterally that the physical signs are more easily obtained.

The first step in this examination, having bared the chest of the patient, is to open your eyes and see what is before you; in other words, inspection. At first there appears a prominence or tumefaction at the right sterno-clavicular articulation; also, a fulness of the external jugular vein. This sign of venous congestion is important. It shows that either the descending cava or right vena innominata is being pressed upon, and explains the vertigo, headache and other symptoms of cerebral congestion, from which he suffers. Sometimes, though not in this case, the congestion may be distinctly shown in the vessels of the conjunctiva.

Our next resort is to palpation, or laying on of hands, and I immediately feel a distinct pulsation in the tumor. The question now arises, may not this pulsation be produced in a solid tumor by an underlying artery? The diagnosis is here effected by observing that the pulsation is expansive. Remembering how it is produced; by a current of blood issuing from a small opening into a larger cavity, every point of whose wall must be affected equally; we see how the pulsation should, in an aneurism, be equal in force over all portions of the tumor, as is the case here. This is an important point in diagnosis, and one to which you cannot give too much attention, for you will find that it is sometimes overlooked by those who should know better. So here I place my hand immediately over the tumor, then deep down in the supra and infra clavicular regions; in fact, all over the walls of the tumor and feel the pulsation in every part to be of equal strength. I can feel no fremitus; Sometimes, though by no means always, this sign is present.

Next to palpation the pulses are felt, a step of some importance; for though oftentimes no positive conclusions can be drawn, there is, in a large number of cases, an inequality either of force or time. Thus I feel the right radial pulse of the patient to be strong and full, while that on the left is scarcely perceptible, and the left common carotid is

somewhat fuller than the right. This may be brought about in a variety of ways. If the aneurism is located, as I take it to be, at the summit of the ascending aorta, and involving the first part of the arch, the innominata is evidently patent, as shown by the full radial pulse; while the diminished left radial—the diminution extending clear up the brachial artery—together with the stronger left carotid, indicates that the calibre of the left subclavian or brachial has become partially occluded or distorted, the circulation in the arm being carried on collaterally. Or else, as the aneurism is undoubtedly large in size, its growth may partially be in such a direction as to exert pressure upon the left subclavian.

In a case of this character we can learn very little from percussion. Of course there is dullness over the tumor, but it is impossible to define its limits.

Auscultation in this case gives me only one sign, which, however, is almost pathognomonic. Immediately over the tumor is heard a double sound; in fact, a repetition or reverberation of the heart sounds; precisely what would occur if there were, as Stokes well observed, "two hearts beating in the chest." I can hear no bruit. There is absolutely none now, although two weeks ago it could not only be heard, but the fremitus could be felt. This sign of bruit is another on which mistakes are often made in diagnosis. The bruit is not, as some seem to think, a necessary sign in aneurism, for its presence or absence depends on many circumstances, prominent among which may be mentioned the character of the inner surface of the aneurism or the size of its mouth. This latter being very small and the aneurismal sac being lined with laminated coagula so as to present a smooth surface, the bruit will then be entirely absent. On the other hand, should the cavity be rough and irregular, should there be any projections, the bruit may be very audible.

From further examination I cannot obtain any evidence of hypertrophy of the heart. On this point considerable

difference of opinion obtains among the best authorities. Both Bamberger and Wunderlich say that hypertrophy is almost always present, as also does Niemeyer. On the other side, Axle Key cites eighteen cases in which there was present only a slight dilatation of the left ventricle in a few cases with absolutely no hypertrophy. I myself incline to this latter view. In this case there is certainly no hypertrophy, and I have seen other cases where there was also none. In all such aneurismal affections displacement of the heart is very common if the sac is large and involves the aorta near its root. A downward displacement under these circumstances may readily simulate hypertrophy. I do not deny that with aneurism we may have hypertrophy; the causation of the latter, however, does not lie in the former. An aneurism offers no impediment to the flow of blood, while the fundamental principle underlying the causes of hypertrophy is the existence of some obstacle to the blood current, which has to be overcome by increased cardiac power. Aneurism certainly offers no such obstacle. Whenever, then, there is an hypertrophy coincident with aneurism we must look for other causes; among which are often found valvular lesions or else obstruction from extensive sclerosis of the coats of the vessels.

In a clinical lecture it might possibly lead us too far from our immediate subject to inquire into the possible modes of causation of the affection under consideration, but very often, as in this case, the treatment will in great measure depend upon any special cause that might be elicited. First, an aneurism may depend upon a vitiation of the blood springing from a constitutional affection, as syphilis. I have seen several cases in the etiology of which syphilis was an undoubted element. The recognition within late years of the fact that syphilis produces chronic inflammations of the arteries has done much to render clearer our ideas on this subject. However, it is not probable that syphilis has anything to do with the present case, as the patient affirms positively that he has never suffered from it, and that his family have all been healthy.

There is another general condition affecting the vessels, known as atheroma, which strongly predisposes to aneurism. But the patient is only thirty-nine years old, while this affection occurs in persons much older, nor can its presence be detected in any other part of his body.

The same remarks would, in the main, apply to fatty degeneration. There is no evidence of its existence elsewhere to justify us in ascribing to it any position as a possible cause. Aside from these constitutional and predisposing causes there are exciting causes, as falls, blows, etc. But, in general terms, it may be said that these latter provide only a starting point; that there exists already some constitutional state which predisposes to the affection, without which, and in the healthy subject, the traumatism could have no such serious effect.

In this case no constitutional condition can be ascertained, but the exciting cause at least is indicated by the history, from which we learn that for five years he has been steadily engaged in pumping out coal boats, labor in itself severe, and also causing a greater expenditure of force on one side than the other. Thus, in course of time, from the undue dilatation of the vessels a pouch might have been gradually formed.

I dwell upon ascertaining, as far as may be possible, the cause of this affection, since often there is some underlying constitutional element, without a due appreciation of which no treatment can be of much avail. Several years ago we had under our care an aneurism of the external iliac. The patient had made a misstep and suddenly felt something give way. We diagnosed extensive atheroma, without the existence of which it would have been difficult to explain the origin of so grave an affection from such an insignificant cause. So also there was another case in which the individual had suffered from tertiary syphilis for two or three years. The tumor projected between the second and third ribs, producing absorption of bone. The immediate cause was a severe blow, furnishing, as it were, a starting point.

Also bear in mind when considering the predisposing cause that atheroma occurs late in life, while syphilis, as a rule, is found much earlier.

There is much more pertaining to the subject upon which I might dwell, but the hour has expired, and with a few brief remarks upon treatment, the subject will be dismissed for the present.

The iodidide of potassium is extensively used, sometimes with much success, but more particularly in those cases where there is any syphilitic taint. It is, however, good in all cases, and certainly seems to favor the formation of fibrinous clots. In conjunction with this chemical the fluid extract of ergot is combined, in 15-20 gtt. doses, for its contractile effect upon the vessel.

Electrolysis has also lately been employed, and two or three excellent cures have been recorded under its use. The application consists of the introduction into the tumor of a needle from a battery, which seems to bring about the formation of coagula; in other words, it favors that process by which nature sometimes, though but rarely, cures these affections."

CHLORAL IN THE FIRST STAGE OF LABOR.

By B. Bribach, M. D., Female Hospital, St. Louis.

THE practice in this institution of administering chloral to overcome undue rigidity of the os uteri in labor, has induced me to take notes on the effect of this drug, in its influence on the character of the pains, on the os uteri, and on the fetus. During the last few months of my service on the lying-in floor I gave chloral to the majority of parturient women, excepting only those cases, mostly multiparæ, with which the first stage was short and easy, and a few others where its use was contraindicated by existing heart lesions. The following remarks are based upon observation of 31

labor cases, mostly primaparæ. The mode of exhibiting the drug consisted in giving fifteen grains every half hour until the patient came under its full influence; in unusual rigidity of the os thirty grains were given as the initial dose. The total amount in each instance varied from thirty to seventy-five grains, forty-five grains being sufficient in the majority of cases. To a few patients thirty grains were given by enema; and I will here remark that in the parturient state chloral appears to act even more promptly and satisfactorily when given by the rectum than it does when given by the mouth.

Effect on the Pains.—Chloral modifies the dilating pains of the first stage in so far that it renders them decidedly less frequent, more effective, and less harassing to the patient. Pains occurring every five minutes will, after the exhibition of chloral, generally recur less frequently, about every ten minutes. The teasing, wearing sensation in the interval between the pains, with its suffering and the lamentations of the patient, subside, giving way to a state of peaceful somnolence. During the pains the patient is aroused, but the expressions of pain and worry are much less marked. The effect is often so very striking that the parturient process seems to be entirely suspended. Digital examination during the pains, however, shows the uterine contractions to have increased in efficacy, from the more powerful protrusion of the amnion and the rapid progress of the first stage.

No effect is appreciable on the third stage of labor. In the cases under consideration the propulsive pains were frequent and vigorous, probably more so than they would have been if the energy of the patients had been allowed to be wasted by the sufferings of a prolonged first stage.

Effect on the Os Uteri.—Chloral has the the undubitable property of overcoming functional rigidity of the os, and this effect may be confidently looked for in all cases which have been fully brought under its influence. In some instances the rapidity of its action is surprising. I have re-

peatedly found that an os, which, after hours of severe pain, had remained small, rigid and almost cartilagi ous, would become flaccid and freely dilatable half an hour after the administration of thirty grains of chloral; but few cases will fail to yield after the lapse of two hours. he presence of fecal matter in the lower bowels seems to counteract the action of chloral; in two cases of rigidity of the os, which had remained intractable for several hours, a speedy relaxation took place after the administration of soap water enemata; the rectum in both cases was empty. I am unwilling to opine whether the favorable result is to be ascribed to the emptying of the colon, or to the mere presence of the warm injection.

Effect on the Fetus.—A late writer has stated that great caution is necessary in the exhibition of chloral to parturient women from its deleterious influence on the fetus, since he supposes that one-twelfth of the amount given passes into the fetal circulation. I have been unable to discover any evidence of its action on the child, before and after birth. The frequency of the maternal pulse is always slightly diminished by chloral, but in no case have I found a corresponding decrease in the fetal heart sounds. In one instance the mother's pulse, in the interval between pains, fell from 78 to 60, while the fetal heart for three consecutive hours, up to birth, remained at 132, the same as it was before chloral had been given to the mother. Neither have I been able to discover any traces of the possible effect of chloral, after birth, on the child's pulse, respiration, sleep, and pupils. A case has been related to me in which the enormous dose of two hundred grains of chloral had been given to the mother during the twenty-four hours preceding delivery, and in which neither mother nor child showed any untoward symptoms of an overdose.

In chloral, then, we have a safe and powerful agent to alleviate the distress of and to shorten the first stage of labor. I believe that more extensive observations will prove that, besides this, it fills an indication of much greater im-

port to the subsequent welfare of the mother, namely, to lessen the risk of laceration of the cervix. Dr. Emmet says that "at least one-half of the ailments of those who have borne children are to be attributed to lacerations of the cervix." Dr. Schenck, in his article published in this journal, says that "the profession could do much if they would bear in mind that chloral, in the early stage of labor, is as necessary as they generally think ergot is in the later stages." The truth of this assertion cannot fail to force itself before long on every obstetrician, and the free and general use of chloral in midwifery will mark a new era of lessened suffering to womankind during and after labor, and will greatly diminish the opportunities of the gynecologist for plastic operations on the cervix.

OPERATION UPON THE RADIAL NERVE BY SUTURES.

A laborer, æt. 31, received, in consequence of the falling of a ceiling, several injuries, among which was a severe bruise upon the outside of the right arm, just below the middle of the humerus; simultaneously there appeared paralysis of the extensors of the forearm and hand. At the site of this bruise the skin sloughed and an abscess formed, which was incised. Paralysis persisting after healing of the part, Langenbeck decided that the radial nerve was divided, and two and a half months after the injury decided to perform an operation. The ends of the nerve were found separated to the extent of two centimetres (three-fourths of an inch); they were freed from attachments, freshened and brought together by a cat-gut suture that was passed through the nerves themselves; this union was effected only with considerable traction. The exsected cicatricial tissue contained no nervous elements whatever. Healing took place without suppuration, and after nineteen days contraction of the extensors could be excited by the Faradaic current. One and a half months after the operation the patient could make considerable movement with the extensors.—*Berlin Klin. Woch.*, 1880, No. 8.

CASES FROM PRACTICE.

CANCER OF THE BREAST—SPONTANEOUS FRACTURES.

By E. M. Nelson, M. D., St. Louis.

[*Read before the St. Louis Medico-Chirurgical Society, March 28, 1882.*]

In the latter part of 1876 or early in 1877, Mrs. N. first noticed a retraction of the left nipple into the mammary gland, and soon discovered a small growth in the outer, lower quarter of the breast. When I first had an opportunity of examination, some months later, the tumor was freely movable upon the pectoral muscle, and tolerably so beneath the skin. I could detect one axillary gland enlarged to the size of a walnut.

There was no history of malignant disease in the family in previous generations; but an older sister, unmarried, had died of this disease several years before, after the tumor had been three times removed by surgical operation. The result of the sister's experience determined Mrs. N. that she would not undergo an operation.

There is little in the clinical history of the case which would distinguish it from other typical cases of mammary cancer; but two points, I think, are somewhat interesting. The first is the effect upon the malignant growth of mental influences. The progress of the disease had been slow, and characterized by comparatively little pain, though the skin had become adherent to the tumor over the lower two-thirds, perhaps, of the breast. In the early spring of '78 some peculiarly trying circumstances connected with the sudden death of a neighbor gave her a very severe shock. This seemed to light up a severe inflammatory process. The advance of the disease was rapid, and a mass nearly the size of the fist sloughed away.

The progress of the disease was apparently retarded after the separation of the slough; but in a few weeks the left arm

became edematous, and the skin over the right breast also became infiltrated with cancer cells, as evidenced by the discoloration and tubercular deposits.

She complained at times of intense pain in the right arm; and it was necessary to use great care in moving it to avoid exciting this pain. Gentle friction or pressure seemed to afford some relief. One morning the pain in that arm was found to have disappeared entirely; but in assisting her to change her position, it was discovered that there was a fracture of the humerus just at the point where the pain had been most intense, at about the insertion of the deltoid muscle.

At the autopsy an examination was made of the humerus, when it was found that a cancerous deposit the size of a walnut had formed in the center of the medulla at the point mentioned, which, in its growth had encroached upon the bony walls and led to the spontaneous fracture, as already described.

In the Louisville *Medical News* of February 21, 1880, Dr. E. J. Kempf reports a case of carcinoma of the breast which has some points of analogy to this. The tumor of the breast, about as large as a goose egg, and a smaller tumor toward the axilla and seven enlarged lymphatic glands were removed by Dr. M. Kempf and Dr. Knapp and Dr. E. J. Kempf. One gland was left at the apex of the axilla beyond reach of the operator.

"Three months after the operation the tumor had reappeared in the breast. Nodules (enlarged lymphatic glands) could be felt in the axillary space, and the arm commenced to swell. Bluish and yellow spots appeared over the shoulder and the breast, and reddish pimples over the latter. The patient also complained of a great pain in the right hip-joint, and of a feeling 'that the leg would break some day.' No tumor or swelling or tenderness could be discovered. Laudanum and morphine were given to ease the patient's way to the grave.

"January 7, 1880, while getting into bed, the patient put her whole weight upon the right leg, when she sank into the arms of her son, saying, 'My leg is broke.' She was placed upon a lounge and I was sent for. I diagnosed the fracture intra-capsular, but, thinking nothing could be done, Dr. Knapp was sent for. Dr. Knapp agreed to the diagnosis, but thought the fracture was of the femur below the trocanters and advised extension of the limb by weight and pulley. The patient was given

tonic doses of quinine and hypnotic doses of morphia, and her urine was drawn off every morning. It was bloody and thick as if mixed with mucus or pus. About once a week the patient was redressed, and her back was washed with whisky and water to prevent bed-sores. They however appeared. Benzoated zinc ointment was applied to them. In this manner the patient lingered until February 10th, when she died.

"Fracture of the femur, if due to cancerous infiltration of the femur, is unique; and we asked for a post mortem, but it was refused."

It seems to me somewhat remarkable that, in the case which I report, the secondary deposit took place in the right humerus, while the primary disease was in the left breast, the left axillary glands were early involved, while those of the right axilla were apparently unaffected; and the left arm was edematous for several weeks before death, while there was no edema of the right arm at all. It would have seemed to me more probable that a secondary deposit would take place on the same side as that in which the primary disease developed.

I find that fractures of the long bones from secondary cancerous deposits are not so rare occurrences as they were supposed to be by Dr. Kempf, and as I had supposed them to be. I find in Billroth's Surgical Pathology (Translation from the fourth German edition), p. 647: "On autopsy, in most cases, we find carcinomatous tumors of the pleura, liver, and occasionally of the bones, it may be of the femur or of the vertebræ, or else of the ribs on the side where the tumor of the breast was." In Erichsen's Surgery (Am. edition of '72), I find: "This [spontaneous fracture] may happen in consequence of the texture of the bone being weakened or rendered brittle by disease, * * * by cancerous growths within the subtance of the bone," etc. In Cornil and Ranvier's Pathological Histology (Translation of Shakspeare and Simes), p. 214, in the section entitled "Tumors of Bones," I find the following statements: "The carcinoma is seldom large; most frequently the osseous tissue is substituted by the morbid tissue. * * * The development of the morbid product in the body of long bones or in their extremities, gives rise to spontaneous fractures."

Paget says (Surgical Pathology, Third Am. edition p. 537), "In the BONES, as in the muscles, the scirrhous cancer seldom,

if ever, occurs, except as a secondary disease; the primary cancers of bone are, I think, always either medullary, osteoid or colloid. * * * When separate cancerous masses are formed they are usually round or oval, or adapted to the shape of the inner walls of the bone, within which they are, at least for a time, confined. They generally appear as if, while they were growing, the original bony textures around them had wasted or been absorbed, making way for their further growth. * * * The bones thus cancerous become liable to be broken with very slight forces; and to these conditions a certain number of the so-called spontaneous fractures in cancerous patients may be assigned."

While there is nothing unique or very unusual, then, in these cases, they are, I think, of sufficient interest to warrant their presentation before the society, and I hope may elicit discussion which will be of more interest and value than the cases themselves.—(Vid. Society Proceedings, this number.)

CONCUSSION OF THE BRAIN.

BY L. H. MUNGER, M. D., FAIR HAVEN, MINNESOTA.

May 22nd, 1879, was called at 8 P. M., to see Mrs. F. the victim of a runaway. Found her pale, cold and slightly moist. Pulse slow, almost imperceptible. Respiration slow, regular and easy. Pupils somewhat contracted. Signs of recent epistaxis were present, but no hemorrhage or flow of serum from either ear. There was vomiting, occasionally a little fluid, dark-colored blood being ejected. There was a small scalp wound just to the left of the occipital protuberance. The left ankle appeared to have been sprained. No other injury was detected. I learned that in the attempt to jump from the wagon, while it was in rapid motion, she tripped and fell, the back of her head striking on the hard gravel road bed. She was thirty-one years old, and not a strong woman before the accident.

When I arrived, two hours after the accident, the friends had given three teaspoonful doses of whisky, and were applying cold water to the scalp wound.

I had the patient put to bed, and dry heat applied to the extremities. Prescribed five grain doses of carbonate of ammonia every hour. At the end of two hours, reaction had commenced, and the stimulant was withdrawn. Patient recognized her husband, calling him by name. Vomiting continued at lengthened intervals. She assumed the lateral decubitus, with all her joints flexed. Complained much of pain in the head, was restless, but not over sensitive to light or sound. No paralysis either of motion or of sensation, could be discovered.

23rd., 6. A. M. Temperature 101° Far. Still complains of pain in head. Prescribed a saline in broken doses, and one-eighth grain doses of morphia sulph. 8 P. M. Temperature 102¼°. Has vomited only twice since morning.

24th, 7 A. M. Temperature 101¾°. Ordered enema of warm water and lemon juice. Midnight. Patient resting quietly.

25th, 7 A. M. Temperature 100½°. Enema repeated. For comfort and convenience, had the patient's hair cut short. Directed milk in small quantities and often, the urinary function has been properly performed all the time. 8 P. M. Temperature 100¾°.

26th, 7 A. M. Temperature 99½°. Enema repeated, and mild laxatives given. 10 P. M. Temperature 99¼°.

27th, 7 A. M. Temperature 99¼°. Patient looks better out of her eyes, is more communicative, takes more food with apparent relish. Saline discontinued. 10 P. M. Temperature 98¾°. Patient quiet.

28th. Mild laxative directed, which the stomach rejected at once. Enema repeated, and saline resumed. 10 P. M. Patient sleeping quietly. Pulse a little faster and smaller than usual. Face slightly flushed.

29th, 7 A. M. Temperature, normal for the first time. Noticed for the first time the wound on her head. She eats and sleeps better. Does not seem entirely rational all the time.

30th. Temperature normal. Rested well all night. 12 M. Patient has taken more food than usual. Bowels moved without injection. The feces being nearly of normal character. She is taking at intervals of from six to ten hours, morph. sulph. grains $\frac{1}{16}$. She has not been at all "flighty" to-day.

After this the patient improved slowly, but constantly, until the 20th of June, at which time she passed from immediate pro-

fessional care. But from the time of the accident until the 1st of June, (when her mother arrived) *a period of nine days, is a total blank to her.* She remembers absolutely nothing of even the circumstances of the accident, though she appeared more or less rational much of the time, knowing her husband, and recognizing her nurse and myself.

August 13th. Patient considers herself as well and as strong as before the accident.

This case seemed interesting in that it was a nearly typical case of uncomplicated concussion of the brain, resulting in complete recovery.

HEART STUMBLING.

BY GEO. HOMAN, M. D., ST. LOUIS.

Having observed some time since an instance of the occurrence of a nearly stated abnormal irregularity in the action of the heart, the features of which impressed themselves firmly on my mind, I have thought some account of it might be of interest.

The patient was a male of excellent habits, past fifty years of age, of so-called nervous temperament, who had through adult life suffered greatly from dyspeptic trouble of the atonic form.

The subject was under close observation for several years before death occurred, which event was preceded by progressive bodily enfeeblement and wasting from difficult food assimilation, and which at last reached an extreme degree; but, as the autopsy showed, unattended with any perceptible evidence of disease of the vital organs; or, indeed, serious noticeable lesion of any structure. The especial symptom which attracted attention and which persisted with little abatement quite to the end, was a seemingly total failure of the heart's action about every fortieth beat, sometimes occurring once in as few as twenty beats, and again but once in a minute or two; the organ having pulsated regularly, though slowly, would seem to abruptly halt, or rather *stumble*, and then with a more or less pronounced struggle, would recover and go on.

I use the word stumble advisedly, as no other term

occurs to me that so well conveys an idea of what I would wish to express. The beat of the organ was not unlike the measured tread of a man walking leisurely along an even pathway, and meeting an unnoticed obstacle over which he stumbled and fell. The instant of quietude following the downfall and the convulsive effort in regaining the feet and gait were imitated in the case observed. The quiescent period usually occupied the time of one customary beat, while the delay in recovery and re-establishment of usual motion consumed nearly as much more. This period was quite tumultuous and emphasized at times, the organ seeming to labor deeply to regain its usual pace and, occasionally, almost ineffectually, until some moments had been covered by broken gaited movements.

Ordinarily, in resuming there would be no great irregularity or acceleration of speed, as if to make up for lost time, but the same leisurely stroke, from sixty to seventy per minute, as before the interruption took place. During prolonged recumbency, the heart would lose a beat or two, and then recover itself without any apparent struggle.

There were no abnormal sounds and the post-mortem established the integrity of the organ, which, though small, was perfect in valve and muscular element. Neither was there present senile degenerative change as atheroma, and death seemed to be due simply to a stoppage of its progressively feeble beating, the event being unremarked for some minutes, as previous to it the usual placid rest was observed.

The failure of motion always seemed to immediately precede ventricular action, and was ascribed to a lack of the stimulus of distention of those receptacles from being so slowly filled, and the occasional subsequent fluttering or marked tumult to inefficient contraction of the walls on the partly empty or slowly filling chambers; a circumstance that may be likened to the racing of a steamer's screw in a storm when lifted in the air where its motion is no longer opposed, and steadied by the action of the water. As before intimated, in a quiescent state of the sufferer, the organ seemed to patiently wait until the ventricles were filled, and action would then be quietly resumed.

The greatest relief from the symptom was obtained from the use of brandy, which also measurably relieved a troublesome cough and occasional nightsweats. The pulse was much steadied

by stimulants, though no sphygmographic tracings were ever taken.

It would seem not unlikely that a profound lesion or derangement of the cardiac sympathetic system or centre was the primary cause of the pertubations of motion observed, but why the innervating influence, or ganglionic discharge should at times be suspended, or be almost statedly intermittent through several years at least, is difficult to explain.

CANCER OF THE STOMACH AND SPLEEN IN A CHILD.

A. Scheffer, *Clinic for Children, Strasburg.*

A very cachectic boy of fourteen years began to complain nine weeks before his appearance at the clinic. His symptoms were, severe pains in the left side, loss of appetite and sleep. There was to be felt in the left hypochondrium a large, painful tumor of smooth surface, corresponding to an enlarged spleen, to the right of which distinct sound of succussion could be produced. There was increase of the white blood corpuscles, irregular remittent fever, slight pleuritic exudation in the lower part of the left thorax. Eleven and twenty days after his entrance there occurred moderate vomiting of ingesta; there were occasionally severe attacks of dyspnea. Four weeks after his admission he vomited dark red and partly copper-colored matter; great collapse followed and death.

Post mortem: Peritoneal adhesions between the different abdominal viscera; two pounds exudated liquid; enlargement of most of the lymph glands. The stomach, much distended, contains bloody mucus and a thin liquid. The cavity of the fundus, encroached upon by masses of morbid growth, a large loss of substance in this region, extending nearly to the cardia. The site of the spleen was occupied by a fissured brittle mass, out of which was removed a portion of spleen tissue much disorganized. Other cancerous masses were found about the cardia and lesser curvature of the stomach.

The tumor proved to be an encephaloid cancer. It had originated in the fundus of the stomach, and passed thence into the spleen.—*Jahrb. f. Kinderheilk.*

EDITORIAL.

Vol. V. May, 1881. No. 5.

EXSECTION OF THE PYLORUS.

We published in our last number, as a selection from the *Medical Times and Gazette*, a detailed account of the startling but successful operation of Prof. Billroth, in exsecting the pyloric extremity of the stomach for the removal of a malignant growth at that part. More than a month after the performance of the operation the patient remained in good health, having recovered from the operation. This first operation was performed January 29th. While Billroth had for several years, been on the outlook for a suitable case for the performance of this operation upon man, having demonstrated its practicability by experiments upon dogs, it is remarkable that a second case for the same operation should have presented itself to the same distinguished surgeon within so short a time.

The second operation was performed within a month after the first one, and is reported in the *Wiener Medicinische Wochenschrift*, of March. The patient was a woman, aged 38, who had suffered for seven months from disease of the stomach which had presented some symptoms of being of malignant nature during the last week. Prof. Billroth made a "diagnostic incision" which operation was extended to that of exsection of the pylorus, as he discovered an ulcerating medullary cancer of that portion of the viscus, which had penetrated the anterior wall, exciting local peritonitis and causing adhesions between the abdominal wall and the anterior wall of the stomach.

These adhesions rendered the operation much more difficult;

and the time occupied in the performance of the operation was two and three-fourths hours; while the first operation was completed in one and one-half hours. The portion exsected included the whole pylorus and a portion of the greater curve of the stomach ten ctm. (3.9 inches) long by 6 ctm. (2 1-3 inches) wide. Fifty-eight sutures were introduced. Four days after the operation there were no indications of peritonitis. On the first day nothing was given but ice; on the second day ice and sour milk were given in small quantities. She vomited some on this day. Tonic and nourishing injections were given regularly. It was found, however, that food could be retained in the stomach but three or four hours, and was then rejected mingled with biliary matter. As there were no symptoms of peritonitis, Prof. Billroth concluded that this condition must depend upon some mechanical obstruction to the passage of food from the stomach into the duodenum. He thought that there was an angular bend at the line of union between the stomach and duodenum and that the adhesions to the surrounding parts interfered with the peristaltic movements of the stomach, which was weakened also by its great dilatation.

Accordingly, six days after the operation he reopened the abdomen, in order to straighten the flexure, if such existed, or to establish a duodenal fistula through which food could be introduced. The diagnosis was confirmed, but the patient was so exhausted that it was necessary to shorten the operation as much as possible. The stomach was stitched to the abdominal wall; and a tube was introduced into the duodenum for the purpose of feeding. Thirty hours later the patient died in collapse. No signs of general peritonitis were found on post mortem examination.

Though the result of this case was unfortunate, it is still an important and valuable contribution to the subject as indicating one of the difficulties that may be encountered, and a danger that may, perhaps, be avoided since it is recognized.

In the *Centralblatt für Chirurgie* of March 12, are given the results of thirteen experiments performed upon animals by Dr. Victor Wehr, of Cracow, with reference to the method of performing this operation. He says that in order to accommodate the lesser caliber of the duodenum to that of the stomach stump, it is better to enlarge the duodenal section than to attempt to diminish the other by folding (Billroth), by gussets (Gussenbauer etc.) or even by exsection of a triangular piece (Rydygier.) This enlargement of the duodenal section can be made by an oblique direction of the line of amputation.

Catgut he found to be altogether the best material for the sutures, so much so that he says no other material should be employed for suture of intestinal wounds.

The danger from hemorrhage, especially from secondary hemorrhage, is greater than has been thought, most of his failures being due to this latter cause. The question naturally arises whether the catgut sutures may not have been responsible in part for this frequency of secondary hemorrhage. The results of M. Lister's recent experiments show that when catgut is used, the greatest care is necessary in its selection and preparation.

Dr. Wehr also has found that elastic compresses are better than compression by the finger for the purpose of keeping the cavities of the stomach and gut closed.

Those persons who have made such bitter opposition to the performance of vivisections should take notice that the practicability of this operation which affords a hope of relief or possibly of cure to sufferers who have heretofore been doomed to prolonged and excruciating torture, was demonstrated, and the best modes of operation determined by preliminary experimentation upon living animals.

CHLORAL HYDRATE IN OBSTETRICAL PRACTICE.

Dr. H. H. Kane, who has been giving a great deal of time and study to the use and abuse of the various cerebral seda-

tives, contributes a paper to the *American Journal of Obstetrics* upon the use of chloral in obstetrical practice.

As the result of much correspondence and search of the literature of the subject, he arrives at the conclusion that the use of chloral should be much more general in obstetric practice than it has become. He asserts that chloral when properly used in labor at full term has a three-fold action; first, to blunt sensibility to pain; second, to hasten dilatation of the womb; and third, to increase the force and frequency of the uterine contractions. He commends it as of special value in quieting the teasing preliminary pains that sometimes precede the commencement of normal labor by several hours or even days.

It seems to be established by the testimony of a number of the physicians whom he quotes, that with moderate doses of chloral it is possible to produce as complete anesthesia as is generally desirable in cases of confinement. In some cases almost complete anesthesia has been produced, so that it was practicable to introduce the hand into the uterus without causing any suffering to the woman. Even Cesarean section has been performed under the influence of chloral alone, by the Italian, Grandessi Sylvestri.

Almost all the practitioners who have communicated with Dr. Kane upon the subject have favored the use of chloral in obstetrical practice for the purpose of relieving the suffering of parturition. Dr. H. P. C. Wilson, of Baltimore, and some others, however, have failed to derive any benefit from it, and do not make use of it at all in their practice.

As to method of administration, Dr. Kane advises the exhibition by enema, and usually beats up the quantity of the drug to be administered with one or two raw eggs and a little warm milk; this is readily absorbed and causes no irritation. In cases where the drug is given after the expulsive pains are severe, it may be necessary to give it by the stomach, as it would be

forced out from the rectum. He advises to commence with a dose of thirty grains and afterward give fifteen-grain doses at intervals of an hour.

In conclusion, Dr. Kane formulates the following propositions:

1. Chloral may be employed in normal labor for the purpose of blunting sensibility, quieting nervous and hysterical manifestations, shortening labor, and destroying pains.

2. In complicated labor it has three uses, *i. e.*, (*a*) to relieve pain; (*b*) to hasten dilatation of the os uteri; and (*c*) to increase the force of the uterine contractions.

3. Chloral, even when pushed to the production of anesthesia, does not destroy the force of the uterine contractions.

4. The alleged danger of post-partum hemorrhage has no foundation in fact.

5. In moderate doses it is never dangerous.

6. The slight delirium that sometimes occurs is ordinarily removed by a second dose and need cause no alarm.

7. It is rarely necessary to use more than ʒj. in any one confinement.

8. It is best given by the rectum, in the form of enemata or suppositories.

Additional testimony to the value of chloral, especially in the first stage of labor is given in the paper by Dr. Bribach, which we publish in this number of the Courier.

ODOR MORTIS.

Every observation which affords a reasonable prospect of increasing our means of diagnosis or prognosis is a subject of interest to the physician. Not much dependence has been placed upon the sense of smell for either purpose. Hence the paper of Dr. A. B. Isham, of Cincinnati, which appeared in the last number of the *American Journal of Medical Sciences*, is a

step into a comparatively untrodden field of medical investigation. Another paper upon the same subject was communicated by Dr. Isham to *The Clinic* in September, 1874. That paper was based upon observations made chiefly while the doctor was in one of the surgical wards of Stanton General Hospital, Washington, in 1863. The recent paper gives two additional cases in which a similar observation has been made.

He says that the peculiar odor, which is of a moschiferous character, yet appreciably differing from that of musk, was familiar to the convalescent loungers about the hospital, and was called by them the *death smell.* In addition to the musky odor there was an ill defined sensation as of the presence of an irrespirable gas.

Dr. Isham remarks that musk contains ammonia in large proportion, and a volatile oil which has never been isolated, and that the odor has been attributed to the decomposition of the ammonia liberating this volatile oil. There is also a volatile oil in blood which has a characteristic odor that may be developed by adding sulphuric acid and boiling. That ammonia is present in the blood has long been known, and Dr. Richardson considers it the agent which maintains the fluidity of the blood.

Dr. Isham suggests that the odor which he has observed may be the result of an escape of ammonia from the blood in the peripheral capillaries, a commencing coagulation and a liberation of the volatile principle already noticed as existing in the blood.

The subject is one with reference to which observations may be made with profit by all physicians. Dr. Isham has generally found this symptom to be manifested only very shortly before death, but in one case, where it was observed very distinctly, the patient lived for thirty-three hours.

BOOK REVIEWS AND NOTICES.

SYPHILIS AND MARRIAGE. LECTURES DELIVERED AT THE ST. LOUIS HOSPITAL, PARIS. BY ALFRED FOURNIER, Professor a la Faculte de Medicine de Paris, Medicin de l'hopital St. Louis. Translated by P. ALBERT MORROW, M. D., Physician to the Skin and Venereal Department, New York Dispensary, Member of the New York Dermatological Society, etc. *New York: D. Appleton & Co.* 1881, pp. xii. 251, 8vo.

This work of the able and distinguished French syphilographer, Prof. Fournier, is without doubt one of the most remarkable and important productions of the day. The whole train of fearful consequences, both present and remote, which attends upon syphilis in the marriage bed has long been recognized, and now and again monographs have been published dealing with limited provinces of the question; but it has been left for M. Fournier to present the whole subject in a thoroughly rounded and systematic manner. Possessing profound knowledge of syphilis in all its protean forms, an unexcelled experience, a dramatic force of expression, untinged, however, by even a suspicion of exaggeration, and a rare tact in dealing with the most delicate problems; he has given to the world a series of lectures which, by their fascination of style, compels attention, and by their profundity of wisdom carries conviction.

The motive of the book is given in the introduction, viz., 1st. A syphilitic subject wishes to marry, and consults his physician as to the propriety of the step. What conditions ought he to fulfill, medically, in order that we may allow him to marry? Or under what circumstances will it be our duty to defer or even absolutely to prohibit his marriage? 2d. The marriage is consummated, and syphilis has been introduced into the conjugal bed. What medical indications are there to be fulfilled in order to lessen or avert the dangers of such a situation?

Part I, "Before Marriage," deals exclusively with the first proposition. At the threshhold of the inquiry the lecturer

draws a vivid picture, to the very life in fact, of the perturbed and anxious syphilitic patient who comes to consult his physician upon a contemplated marriage. We cannot give a better idea of Prof. Fournier's attitude of mind than to quote his own words in this connection. "Now, when such a request is addressed to you, gentlemen, do not misapprehend the gravity of the question. Your response involves interests the most serious, the most sacred, the most dear to the heart of any honorable man, of any reputable family, as well as interests the most diverse and the most multiplied. By this opinion which you are about to formulate, you incur a responsibility which I cannot otherwise characterize than as *considerable;* and I do not think I exaggerate in saying that in the province of the physician there are few problems to solve, on the one hand so grave, and on the other hand so complex, so difficult, so delicate, as this." He then points out that by an inconsiderate reply the physician may fall into one or the other of the only two errors possible to commit in the case. 1st. Through an insufficient and hasty survey of the whole bearings of the case, he may absolutely interdict matrimony, with the consequence of relegating the patient to celibacy, and depriving him of those objects "of natural and universal aspiration, viz., home and children." 2d. The error may be committed in an opposite direction, and the physician may prematurely sanction the union of a man whose syphilis is still active and dangerous. What then follows? This man may infect his wife, "and what is more deplorable than to give a virtuous young woman the pox as a wedding present?" This infected couple will procreate children, who will either die almost as soon as they are conceived, or will be born with the father's disease. "And what is more hideous for the young household than the pox in the cradle?" The child may infect its nurse, who may in turn infect her own children, etc.[1] An exceedingly practical point which the lecturer dwells upon is this, that we should always bear in mind that we are consulted as *physicians*, and should respond as *physicians;* that we are pathologists and not senti-

1 Fortunately in America this last catastrophe is generally avoided, since mothers, as a rule, nurse their own children. In France the wet nurse is almost universally employed.

mentalists, and that our decisions should be based upon medical grounds only. Patients will come to you who have determined upon marrying before crossing your threshhold, but who hope to wring from your sympathies an acquiescence in an already conceived determination. We believe that medical men are guilty of much culpable weakness in this regard.

The important and vital question, Does syphilis constitute an absolute obstacle to marriage, is answered by our author most emphatically in the *negative*. He repeats over and over again that, with very few exceptions, syphilis is only a *temporary* interdiction to marriage, and that a syphilitic may, after a certain stage of *sufficient depuration*, return to a state of health which restores his fitness for the double role of husband and father. In the appendix are recorded eighty-seven observations relative to syphilitic subjects, who, having married, have never communicated to their wives the least suspicious phenomenon, and have begotten a total of 156 *absolutely healthy children*. We believe that there is hardly a practitioner who cannot corroborate these statements according to the extent of his experience. It is a matter then of double gratification that this experienced and able observer should be in a position to mathematically demonstrate the truth of our own limited observation.

But having said so much, the lecturer hastens to show what conditions, medically, should be satisfied before marriage is adventured upon. Before demonstrating this, however, a number of rarely interesting chapters are devoted to ascertaining how and in what manner the syphilitic may become dangerous in marriage. The first point developed is that a man contracting marriage with syphilitic antecedents may become dangerous to his wife in two ways, viz., by direct contagion, and by conception. The first method is the more common. A man marries, who has at the time, or develops subsequently, some of the contagious secondary lesions of syphilis, and infects his wife. As typical of this manner of conveying the disease, we find recorded the case of a young man who marries after fifteen months of syphilis; he develops on the glans two circinate erosions (papulo-erosive syphilides) which are supposed to be herpetic lesions by the patient; intercourse with his wife is continued, with the result of commu-

nicating syphilis to her, "which makes its début by an *indurated chancre* on the vulva, soon followed by general symptoms." The fact is well brought out that the man who has the moral hardihood to marry with an active syphilis is almost absolutely sure to infect his wife. "The pox, like the daily bread, is divided between husband and wife" (Dechambre).

The second mode of contagion which the writer accepts is what he terms syphilis by conception, the so-called *choc en-retour*, of Ricord. This opens up the whole question of the conveyance of syphilis through the utero-placental circulation, a method of communication now denied by many eminent syphilographers. It is but fair to present the argument which M. Fournier adduces in support of his position. In the first place, he says, cases are numerous, well authenticated, and in which we cannot assume material errors of observation, where the young wife has become syphilitic from the contact of her syphilitic husband, without the husband having at the time the least external lesion capable of infecting her. In such a situation, he declares that *pregnancy is never absent;* in other words, that a woman who becomes syphilitic without initial accident, and from contact with a husband long free from any external manifestation, has acquired the disease from her child. The lecturer insists that unless we accept this pathogeny, syphilis contracted under such circumstances will, from his standpoint, be inexplicable. Among other arguments he points out that if a woman thus situated does not become pregnant, she remains uncontaminated; but if she become pregnant, immediately syphilis breaks out upon her. Again he regards it as impossible that a fetus syphilized by the father should fail to convey the disease to the mother; for he adds that if maternal syphilis have the power of reflecting itself upon the infant, why should not the syphilis of the infant reflect itself in like manner upon the mother. Here, however, we detect a fallacy in the reasoning. No one questions that the ovule of the mother, like the sperm cell of the father, diseased at the time of conception, conveys syphilis to the child; but it has not yet been proved beyond cavil that the mother, infected during her pregnancy, is capable of contaminating her child. In other words, there is the strongest sort of evidence that syphilis, as such, is never conveyed by the child to the mother, or vice versa, through the medium of

the utero-placental circulation. But while we are constrained to accept this doctrine by the mass of clinical and other evidence in its favor, we cannot call in question the unimpeached force of the law of Colles which declares that the syphilitic child never infects its apparently healthy mother, nor of that other law which holds that the apparently healthy child is never infected by its syphilitic mother; but we think these obscure phenomena are susceptible of a plausible explanation. We believe that the white blood corpuscles, being the carriers of the specific poison, do not pass through the septum of the fetal and maternal vascular systems, and, therefore, do not give rise to the coarser manifestations of syphilis, but that a peculiar syphilitic influence is exerted, which is protective against further infection. We believe also that exceptions to these laws are very possible, occurring in cases where this influence has been weakened by time or treatment. We frankly confess, however, that the whole subject is a very obscure one, and that our observations are not yet sufficiently ripe for any definite conclusions.

The second reason which Prof. Fournier gives, why a man with active syphilis should not marry is, that he may become dangerous to his children. It is well known that a few authors have contended that the father never conveys syphilis to his offspring, but that it is transmitted through the mother alone. We believe we are entirely safe in saying that this position is utterly inconsistent with the facts, but it is none the less true, and this our author has shown most clearly, that the influence of the father is by no means so vicious as was at first supposed; indeed, in many cases where the mother remains healthy the child is born free of all taint. One of the most convincing arguments in favor of paternal heredity which Prof. Fournier furnishes is this: The father has syphilis; the mother is perfectly healthy, yet, without appreciable cause, suffers repeated miscarriages; the father alone is put upon specific treatment; subsequently the mother is delivered at full term. The practical value of this observation is of the greatest importance. Finally, the lecturer states that, while paternal influence is limited, it may show itself in three forms, viz: 1. By the direct transmission of syphilis to the fetus; 2. By an inaptitude for life in the fetus, revealing itself by death *in utero*, or shortly

after birth; and 3. By inherent degeneration of the germ, which manifests itself subsequently under very diversified morbid forms. In regard to the second mode—the so-called inaptitude for life—it is stated that infants come into life in a favorable or average condition; then, after a few days—a few weeks at most—they are suddenly extinguished; they die without disease, without apparent cause.

One of the most interesting chapters is devoted to "mixed heredity." In the epigrammatic language of the lecturer, "a syphilitic father is dangerous to his children not only in his character as progenitor; he is, or may become, dangerous to them in his character as husband of their mother." In other words, when the husband has communicated syphilis to the wife, the consequences of such a pathological union are of the direst character to their offspring. What, inquires the lecturer, will happen to the infant procreated under such circumstances? Its future, he continues, is comprised within the three following alternatives: 1, either the infant will die before birth; 2, or, it will come into the world with syphilis with all its terrible consequences; 3, or, finally, it will come into the world without syphilis, but with compromised health, an innate debility, which will expose it to early death, with *menacing morbid aptitudes,* and with a tendency to certain organic vices. Prof Fournier is thoroughly convinced that children sprung from syphilitic ancestors are particularly prone to diseases of the nervous system, especially convulsions, meningitis and a certain amount of imbecility or downright idiocy. He thinks that some of the reported successes of the iodide of potassium in meningitis find their explanation in this fact. While he regards it as a great exaggeration to look upon scrofula as a degeneration of syphilis, it having no need for syphilis in order to exist, and since, *ordinarily,* scrofulous children are descended from non-syphilitic parents, still, he adds, it is no less certain that syphilis constitutes *one of the affluents of scrofula* by virtue of its vicious, deteriorating influence upon the system. To use his own graphic expression, "It beckons scrofula in its train."

The author also suspects that syphilis is the *fons et origo* of many organic and functional disorders, viz: congenital malformations, arrests or deviations of development, spinal curvatures, deafness, keratitis, strabismus, etc. We believe that the

investigations of Hutchinson and others have quite proved the validity of this suspicion; but here we should proceed most cautiously, especially if we look through the spectacles of the specialist.

The general profession, however, are more than willing to accept the diabolical and all-pervading influence of syphilis. This tendency is most marked in relation to cutaneous affections; for, in our experience, the majority of persons with a skin disease have the question put to them as to syphilitic antecedents. We have personal experience of more than a dozen cases of tinea versicolor treated energetically, and for varying periods, on this hypothesis. Syphilis fully justifies the old proverb about giving a dog a bad name, etc.

The pernicious influence of maternal heredity is best expressed in figures. The first series represents eighty-five cases of pregnancy occurring in the private practice of M. Fournier, to-wit:

Cases of survival, - - - - - - - - -	27
Cases of death (abortion, premature birth, still-born, infants dead within a short time after delivery),	58
Total, - - - - - - - - -	85

This gives the appalling proportion in round numbers of more than two cases of death in every three births. This is the more striking when we remember that these cases were under the control of one of the most skillful syphilographers in the world.

The second series comprises observations made at the Lourcine.

Cases of survival of infant, - - - - - -	22
Cases of death of infant (as in table above), - -	145
Total, - - - - - - - - -	167

One infant surviving to seven or eight births. In twenty-eight pregnancies recorded by Dr. Coffin at the same hospital, only one child survived. The hospital cases, M. Fournier says, represent syphilis practically not treated.

And thus, concludes the lecturer, it will be observed how a man contracting marriage with a syphilis not eradicated may be dangerous to his children.

This *ensemble*, however appalling it is, by no means ends the long list of calamities which such an individual entails upon his family. M. Fournier is merciless. He declares *that a man who enters into marriage with a syphilis not extinct may become dangerous through himself to the interests of his family.* This point of view, we confess, had not occurred to us; but a little reflection will readily show its profound scientific truthfulness, and, moreover, its common morality. M. Fournier very happily employs a commercial simile to illustrate this phase of the question.

No one, he says, has the moral right to enter into a partnership when he furnishes his share, unknown to the other who enters honestly into the transaction, in values which are doubtful, hypothecated, adulterated, and stamped with an inevitable depreciation of market value in the future. Such conduct would be considered as the height of business dishonesty; but how much more criminal is the man who contributes to the matrimonial partnership a health depreciated in quality, with the probable prospect of pathological catastrophies in the future, which will as surely compromise the material interests of the association into which he has entered. A number of cases are given which vividly illustrate this position; but our space will allow of but one quotation: A painter, full of talent and promise, marries, although his syphilis had been very insufficiently treated. The pictures sell and the household prospers. Then the husband has inflammation of the eyes, which, treated tardily by specific medication, eventuates in complete blindness. Consequence: family ruined, and forced to seek public charity.

We turn with a sense of relief from these gloomy but truthful portrayals to learn what are the conditions of "Admissibility to Marriage," which occupy the concluding portions of the first section of the work. These essential conditions are summarized as follows:

1. *Absence of existing specific accidents.*
2. *Advanced age of the diathesis.*
3. *A certain period of absolute immunity consecutive to the last specific manifestation.*
4. *Non-threatening character of the disease.*
5. *Sufficient specific treatment.*

If the patient satisfy all these combined conditions, Prof. Fournier considers him eligible to the position of husband and father.

He then makes a minute analysis of these various propositions, into which, with the readers indulgence, we shall briefly follow him.

1. *Absence of Existing Specific Accidents.* — Comment here would seem to be unnecessary, but the author relates cases where men have married in the full blush of primary and contagious secondary lesions. We recall an instance when a young man of wealth and intelligence married while still suffering from a chancre. He infected his wife, who subsequently gave birth to a short-lived syphilitic child, and the mother herself finally succumbing to the disease. If such moral depravity is astounding, what can be said of those instances where medical men have either acquiesced to, or, at the best, not opposed the marriage of men still capable of infecting their partners.

2. *Advanced Age of the Diathesis.*—Here we find laid down the trustworthy axiom, that syphilitic contagion in marriage is much the more to be feared for the wife the more recent the date of the syphilis of the husband. The reasons assigned for this are, that at this period the patient is particularly prone to the disseminated manifestations of the diathesis, especially mucous patches, which have for their seat of predilection the mouth and penis, which, from the point of view of contagion, are the most dangerous sites. Another important factor urged is, that many of these lesions are eminently dangerous through their very benignity, being frequently overlooked or confounded with simple eruptions. *Per contra,* the older lesions are more profound, and, therefore occasion more circumspection, and, moreover, no longer affect, with the same persistence, the mouth and penis. Still another point in favor of an old syphilis, as clearly established in these lectures, is, that paternal transmission is not nearly as probable. In brief, time exhausts the paternal syphilitic influence, and renders it progressively less dangerous for the offspring. Example: A physician contracts syphilis and treats himself for about six months. Believing himself cured, he marries three or four years later. His wife remains healthy, and becomes *enciente* eleven times.

First pregnancy: child still-born.

Second pregnancy: child still-born.

Third pregnancy: child born *alive* but *syphilitic*, and *dying* with symptoms of hereditary syphilis.

Fourth pregnancy: same as above.

The last seven pregnancies furnish children who, although syphilitic, resist the disease, and all remain living. Mireur's observation is still more curious: A young man marries at the very outbreak of the secondary stage. He infects his wife. After this occur eight pregnancies, as follows: 1st, Abortion at fifth month; 2d, Abortion at seventh mouth; 3d, Accouchment before term—child dead; 4th and 5th, Children living, but syphilitic—the first dying at thirty days, the second at one month and a half. 6th, 7th and 8th pregnancies: Children living and healthy. The husband and wife received no treatment whatever. The most remarkable part of this remarkable history is that, subsequent to the last three pregnancies, the father and mother still presented specific lesions of a grave character. Since, however, these accidents consisted of "gummous and ulcerated tubercles," it lends strength to the view that these so-called "sequelæ" are inoffensive as regards transmission of the disease.

Moreover, it is claimed, the advanced age of the diathesis diminishes the personal risk of the subject. And, in reality, he continues, the age of the diathesis enables us to form a comparative judgment as to the degree, intensity and general prognosis of the malady; not that a primarily benign syphilis may not eventuate most malignantly; yet, at a certain advanced period, the most menacing forms are no longer to be feared. Again, a very essential point is, that this intermediate period may have been employed to the best advantage in a prolonged and salutary treatment. As regards the age of the disease, M. Fournier emphatically declares that no syphilitic should be allowed to think of marriage until a minimum period of *three or four years* has elapsed, devoted to a careful and assiduous treatment. Even after that lapse of time, and providing that the treatment has been methodical and active, marriage is only *tolerated*, because, other things being equal, the author thinks he has no absolute right to interfere. But he would feel much safer if six, eight or ten years had gone by, because such a delay furnishes the additional weakening influence of time upon the diathesis, which we have just seen is so powerful in that respect.

Prolonged Period of Immunity.—The third condition required is that a certain period of freedom from all manifestations should have supervened. The longer this period of immunity, the more assuring the prognosis, but in order to establish a minimum, M. Fournier thinks it would be imprudent to allow marriage under a period of eighteen months to two years of absolute absence of all specific phenomena. An additional guarantee is furnished if this immunity coincide with a prolonged withdrawal of anti-syphilitic treatment. Each case, however, should be studied on its own merits.

4. *Non-menacing Character of the Diathesis.*—Our author holds that there are some cases of syphilis which are essentially and inherently bad for marriage. Among such are: 1. Cases which, without necessarily being severe, tend to constant relapses, particularly mucous erosions. Such lesions, occurring notably in smokers, are readily cured, but as readily re-appear; in short, a source of constant menace, as regards contagion. 2. Equally bad for marriage are cases characterized by the intensity and multiplicity of their accidents, and their rebelliousness to treatment, clearly testifying to the malignity of the diathesis. 3. Cases which have their seat of election in some important organ, as the eye, brain, spinal cord, etc. A tendency to cerebral syphilis is regarded as an almost express interdiction to marriage; but should the patient have suffered from any of the undoubted accidents of specific encephalopathy—hemiplegia, epileptiform, siezures, etc.,—then the prohibition is absolute. Even benign attacks of syphilis, M. Fournier does not always consider as fulfilling this early promise. In another publication he has shown that grave cerebral syphilis seems to attack by preference cases which were unusually mild in their beginning. Broadbent shares this view. The explanation offered for this illogical state of affairs, is that their very benignity has been the cause of an insufficient treatment. Therefore it is concluded that the initial benignity of a syphilis offers no pledge of security for marriage, unless it be joined with the guarantee of sufficient treatment. Another rule of conduct which we make bold to offer on our own responsibility, is that a syphilitic with an inherited neurotic diathesis is more prone to specific cerebral disease than others, and that this circumstance should be regarded in making up the "pathological balance sheet."

5. *Sufficient Specific Treatment.*—This is the condition *par excellence*, the whole key-note of the book. It is scarcely necessary to enter into a detailed analysis of this part of the subject, which, however, is expressed with remarkable clearness and vigor. The beneficial effect of specific treatment in all the relations of syphilis which we have just been considering is abundantly proved by irrefutable arguments. But what constitutes this sufficient treatment is a question of great moment and interest. In the author's own words, it is in brief this: 1. A treatment which is based upon the two great specifics for the pox, viz., mercury and iodide of potassium. 2. A treatment which is based upon the use of these two remedies in veritably *active* and *curative* doses. 3. A treatment which is prescribed and regulated according to a certain method—the system of successive or intermittent treatments. 4. A treatment which, after this manner, is rigorously pursued at least three or four years. Even after this period it is prudent to submit the patient every few years to a fresh iodide course.

A very practical question is next noticed under the head of "the use of sulphur waters. People are in the habit in France, as well as in America, of appealing to the judgment "of the waters." It is popularly believed that if there be any lingering syphilis in the system, the waters will bring it out, whereas, if a cure have been obtained, nothing will appear. M. Fournier emphatically denies the truth of this notion. He says that without doubt the daily use of baths, douches etc., acting as irritants, may sometimes determine the appearance of a syphilitic eruption. All hydropathic physicians are familiar with the fact. But such action is by no means constant; for he has notes of hundreds of observations where patients had taken numerous courses of the waters without producing any eruptions, in whom severe attacks of the disease had subsequently occurred. Such is our own by no means limited experience with the "water test." It is but fair to add that M. Fournier believes in the utility of thermal springs in some varieties of syphilis, and moreover, that they facilitate the tolerance of strong mercurial medication.

In concluding this portion of his lectures, M. Fournier denies that he has succeeded in presenting a "perfect code of marriage for syphilitic subjects," and states that our verdict will always

be formed to a certain extent upon a simple *calculation of probabilities.* The author's records certainly show that judicious advice, conscientiously followed, resulted generally in the happiest manner, while, on the other hand, where such advice was disregarded, the most lamentable results were the rule. Of course there are exceptions which defy all rules, and, it is said, in that way prove them. The necessity of explicit directions even to those who have gained our consent to a marriage, as regards their conjugal relations, is insisted upon, viz., a minute watchfulness of the person, and entire refraining from any contact in case a suspicious lesion should make its appearance.

Part II is a study of "Syphilis after Marriage." A syphilitic man not cured of his disease has become a husband. What are the dangers of this situation? And how should the physician act in order to lessen or avert them? Consulted under such circumstances, M. Fournier advises that the patient be informed in regard to the three following points: 1. The patient's personal dangers. 2. Danger of contagion for his wife. 3. Danger of heredity for his future children. The practical indication is to cure the husband as speedily as possible. In the first place it is urgently recommended to *suppress forthwith* all sources of contagion. If, for example, the case be one of secondary accident of the mouth, throat or penis, they are to be destroyed at once by the energetic use of the acid nitrate of mercury, the nitrate of silver being regarded as too feeble.

The constitutional treatment upon which the patient is placed should be of special *intensity.* Ten to fifteen centigrammes of the proto-iodide and two, three and even four centigrammes of the sublimate daily is recommended, besides associating the iodide of potasium with the mercury. Such treatment is to be kept up for about two months, then discontinued for some weeks, in order to avoid habituation, and then begun again in the same way, and so on. M. Fournier is particular to state that such treatment cannot be carried out in all cases, but that when it can be applied it ought to be followed. It is to be understood that the husband should be warned of the contagious nature of his lesions; for in the vast majority of cases the contagions transmitted in marriage are from the ordinary benign and insignificant lesions of the secondary stage. Since

the author is a strong believer in the doctrine of syphilis by conception he couples his other advice with the strict injunction that pregnancy should be guarded against at all risks.

A second order of cases is of this sort: A man has syphilis; his wife remains uncontaminated, but pregnant. Is there anything to be done for the wife and the infant in her womb? Should the mother be put upon specific treatment? The answer to this query is in the negative. M. Fournier consulted Ricord on the subject, and as it is long since the world has had the benefit of any of the great master's utterances, we shall take the liberty of quoting, in part, his response. "It would be impossible for me," said M. Ricord, "to give a categorical solution of the grave question of which you speak, and one which has deeply interested me for a long time; however, from my own experience, I have been led to believe that the plan of inaction, of expectation, is altogether the most judicious in this matter. * * * * Whatever may be my desire to save a compromised future, it is repugnant to me to act at hazard, to try a campaign of adventure. I am loath to condemn to a mercurial treatment a young woman who has at present nothing syphilitic; who may, indeed, both she and her child have escaped the pox, and when, besides, a treatment would not, perhaps, save her from the pox, if she had already received it, etc." . . . . .

M. Fournier, however, makes one reservation. He says that if a healthy woman, married to a syphilitic man, has *several* miscarriages in succession, active treatment is justified.

When the husband is syphilitic and the wife *recently* contaminated, there arise unusual difficulties, both social and medical, with which to contend. A vital rule of conduct which is then to be imposed upon the husband is an absolute interdiction of pregnancy. A conception under such circumstances would be most disastrous. It is an impossibility, in an abstract of this sort, to give an idea of the remaining portion of this chapter. It deals with the mission of the physician in relation to the wife; of his obligation to conceal from her the name and nature of her disease; of contests with feminine acuteness; difficulties of making a woman ignorant of her disease, accept the long treatment necessary, etc., etc.

It is stated as a fact that few women, contracting syphilis

from their husbands, are ever sufficiently treated, and are thus exposed to the most serious consequences in the future.

Chapter xv. deals with the most serious situation possible to occur after marriage. Husband syphilitic; wife syphilitic and *pregnant*. The child procreated under such circumstances is subject to the gravest prognosis—it may die after some months of intra-uterine life; it may come to term still-born or moribund; it may be born with the pox. Now should this child be confided to a healthy nurse it is almost sure to infect her, who in turn will infect her own children, and so on.

But, says M. Fournier, however serious and critical this situation, it is by no means desperate, either for the present or the future. If this couple are treated actively and methodically, it will occur that in the course of time they will have healthy and living children, free from specific taint. Nor as regards the existing pregnancy, is it impossible to avert a complete disaster. The mother submitted to an active treatment during gestation may give birth to a living and viable child, and one which may remain free from every specific accident. The propriety of mercurial treatment during pregnancy is discussed ably and at length; the arguments against it are refuted, and a sound basis for the mode of procedure established. A consideration of the dangers to society—social prophylaxis—brings to a close these brilliant and fascinating lectures. The two rules deduced from the vast array of facts bearing on this subject may be summarized as follows: 1. That the physician should see to it that the offspring of syphilitic parents should be kept under the roof of its birth in order that he may watch over the child, treat it if necessary, and suppress as quickly as possible the contagious accidents which may arise.

2. The physician should strenuously oppose confiding the child to a nurse; he must make the family accept as an absolute necessity the nourishment of this child by its own mother.

The rest of the book, fifty-five pages, is taken up with rarely interesting and instructive notes and illustrative cases; in fact, a commentary and a confirmation of the views expressed in the body of the work.

Dr. Morrow, the translator of the these lectures, has done his part quite satisfactorily, and has put the medical profession in this country under great obligations.

W. A. HARDAWAY.

A Treatise on the Principles And Practice of Medicine: Designed for the use of Practitioners and Students of Medicine. By Austin Flint, M. D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine in the Bellevue Hospital Medical College, etc., etc. Fifth Edition. Revised and largely re-written. *Philadelphia: Henry C. Lea's Son & Co.* 1881. 8vo., pp. 1150.

Flint's Practice needs no introduction to American physicians. In view of the immense sale which it has had and is likely to have, it is cause for devout rejoicing that this work has been revised, in part re-written, and, so far as its narrow limits allow, has been brought up to the times.

It is further matter for congratulation that the labor of revision has been shared by Dr. William H. Welch, Lecturer on Pathological Histology in Bellevue Hospital Medical College, who has also contributed in part I, seven chapters on the general pathology of the solid tissues and of the blood.

These chapters, by Dr. Welch, are a very valuable addition to the book, constituting, in fact, an epitome of general pathology, and are fully abreast of the times. While all intelligent physicians concede the importance of understanding the principles of general pathology, it must be admitted that a comparatively small proportion of medical men have any clear ideas on the subject. It is preëminently proper that a treatise on the practice of medicine should be thus introduced, and it is fortunate for the profession that this task should have been entrusted to such competent hands. The perusal of Dr. Welch's seven chapters would pay most men for the purchase of the book.

When we come to Prof. Flint's portion of the work we find ourselves on familiar ground, and cannot but be surprised at the statement of the author that it is "largely re-written." If to re-write a thing be to write it over again in precisely the same words in which it was written before, then the claim might be allowed. Page after page and chapter after chapter are found, on comparison to correspond, word for word, with the second edition published in 1867, till one wearies of looking for the "eliminations, substitutions and additions" which we are told in the preface, "render it essentially a new work."

There *is* a new section, embracing five chapters, on diseases of the chylopoietic system, such as anemia, simple and pernicious, leucocythemia, Addison's disease, etc. The section on

diseases of the nervous system has been entirely remodeled, so far as its nomenclature is concerned, the latter having been placed upon an anatomical basis, according to the method long in vogue upon the continent of Europe. In this section a number of additions have also been made, and the author has modified some of his former views to correspond with the present state of knowledge on the subject.

All that portion of the work treating of diseases of the respiratory and circulatory systems is good, as it always was. This is ground on which Prof. Flint is especially at home, and when he does speak with positiveness he may be looked upon as authority. It is always a disappointment to find an author occupying as negative ground as Prof. Flint does on some questions of considerable practical interest to physician and patient, such as whether changes of climate have any influence on pulmonary phthisis, or whether local applications, caustic or otherwise, are advisable in diphtheria. We have a certain right to demand that an author should have an opinion before he takes up his pen. It is not enough for him to tell us that some good men think one way and other equally good men think the other way. We probably knew that before. The question which the reader always puts to the writer, when he takes up his book, is, "what do *you* think about it?"

It always was a matter of surprise that an American author of a Treatise on the Practice of Medicine should not have devoted more research and more space to the question of malarial diseases, constituting, as they do, so large a proportion of the diseases of this entire continent. This is the more surprising in the present instance, because the author has practiced and taught medicine, not only in New York City, but also in Louisville and New Orleans. The present "re-written" edition contains nothing more on this subject than the old editions, and the American medical public steeped in malaria, must still turn to the translated writings of a Dutchman of Amsterdam for a careful description and thorough discussion of malarial diseases.*

Notwithstanding these and other criticisms which might legitimately be made on Flint's practice, the fact remains that the fifth edition is a decided improvement on those that have

*The article by Hertz, in the second volume of Ziemssen's Cyclopedia.

preceded it, and that if a man wants an American work on practice, this is the best in the market.

The work of the publishers has been admirably done, and the binding in half Russia makes a very handsome volume.

E. W S.

TRANSLATIONS.

THE ALKALINITY OF THE BLOOD.

M. J. Garel having made a large number of careful observations with reference to the alkalinity of the blood in different conditions finds that the results of different observations are not always concurrent, probably due, he says, to imperfections in the process of examination. The following conclusions, however, he feels warranted in advancing with some degree of assurance:

The most incontestable fact is the slight alkalinity of the venous blood. I have verified this not only in man, but also in animals. In these last I made parallel analyses of the blood from the femoral artery and vein. The experiment was the more conclusive, as I operated upon a much larger quantity of blood. It is readily perceived, then, how we have noted with M. Lépine that the blood is less alkaline in cyanosed subjects than in the natural state. It is to the increased quantity of carbonic acid that it is necessary to attribute the diminished alkalinity of the blood.

In febrile diseases the results obtained are contradictory, There is sometimes increase, sometimes diminution of alkalinity. We are reduced to simple hypotheses to explain these facts. If the alkalinity diminishes, it may be admitted that the globules are more fully charged with carbonic acid. If, on the contrary, there is increase of alkalinity, we suppose that it is in relation to the destruction of discs; the red discs in their destruction yield up potassa to the plasma of the blood. We know, in fact, that the alkalinity of the discs is much greater than that of the serum This last fact explains how, in the ane-

mic and the cachetic, whose blood is poor in red discs, the alkalinity of the blood is very slight. It accounts also, for the almost insignificant alkalinity, which I have observed, either in the serum from clots or in different pathological serosities.—*Lyon Méd.*, Jan. 2, 1881.

OBSTINATE EPISTAXIS CHECKED BY A BLISTER OVER THE LIVER.

Reported at the Congress of Rheims by DR. GARNIER.

J. Wurtz, æt. 59, large and robust, drinks and eats heartily, states that his health is good; entered the hospital on account of a nasal hemorrhage. He had already had epistaxis at various times, but the attacks were so slight that they had given him no great inconvenience. June 28, without known cause the blood escaped from the left nostril in considerable quantity, but was soon checked by cold applications. The next day, about the same hour, the flow reappeared, and a little more abundant. It resisted mild measures, and was controlled only by tamponade and ferr. perchlorid. Wurtz had no headache, fever. nor any any other symptom than the hemorrhage. June 30th, at the same hour, 5 a. m., again epistaxis occurred, which again required tamponade; but this proving ineffectual, Wurtz applied to the hospital, appearing pale but without any other symptoms, not even exhibiting alarm.

The patient was put in bed, the nostril thoroughly tamponed, cold applications to the forehead. On account of the periodicity quinia sulph. was given. The day and night passed without further inconvenience, but the next morning brought the same occurrence, blood flowing past the tampon. For eleven days, inclusive from June 28, this periodical flow appeared, lasting three or four hours. Quinine, digitalis, ergot, all were of no avail; the tampons were retained, and probably limited the flow; these at last, by reason of the great irritation set up, became intolerable, and the patient's case appeared rather desperate.

Epistaxis, when not due to violence or local tumors may arise under the influence of a febrile state, of a constitutional disease, or of a lesion of some important viscus, like the heart

or liver. As there was a rheumatic diathesis, digitalis had been given, although the heart itself did not offer anything abnormal. It has just been stated that this remedy proved fruitless. The ergot was given both internally and subcutaneously. After the failure of all these prescriptions, another physical examination was made, particularly in the region of the liver, although the patient could give no history of any ailment referable to this organ. After minute examination the liver was found to be reduced one-third in volume; pressure elicited no tenderness. As the patient had been a free drinker, the first stage of cirrhosis was diagnosed, and a blister placed upon the right hypochondrium ten ctm. (4 in.) in diameter. The next day there was no epistaxis, nor upon any following day up to the time of the patient's discharge.

The question arises whether the cure was due to any influence upon the liver or simply to the derivative action of the vesication (the action of the blister was prolonged by irritating ointment). Blisters above the fold of the groin are efficacious in checking uterine hemorrhage, consequent upon congestion of the ovaries and chronic ovaritis. If it could be proven that distant hemorrhage may be provoked by reflex action, it would be logical to treat the organ at fault. Hippocrates recommended cupping in the mammary region against metrorrhagia, Galen in the hypodrondriac against epistaxis. — *Gaz. Hebd.*, *Mar.* 11, 1881.

THE MICROBION OF TYPHOID FEVER.

These are, in brief, the methods of investigation of M. Tizzoni. With the object of seeking out the specific microbion, the author, in the time that an epidemic of typhoid fever prevailed at Catana, filtered a large quantity of drinking water and examined the residuum deposited upon the filter. In this residuem he saw, among other microscopic elements, *zooglies*, or micrococci analogous to those described by Billroth, Cohn and Letzerich, and represented by rings of ovoid cells, forked branches of cells or rings of the same nature, all endued with very active movements.

Similar attempts at filtration were made with air; but they

were negative; the air was passed through Liebig's bottles containing distilled water.

The residuum from the filtered water was mixed with distilled water and injected under the skin of several dogs. We know that these animals are quite refractory to the infection of typhoid. Some veterinarians even wholly deny the occurrence of this disease in dogs. However this may be, after these injections, we noted all the clinical and anatomo-pathological phenomena of abdominal typhus.

In addition let us cite some of the conclusions of M. Tizzoni's memoire:

1. Insoluble organic matters extracted from drinking water by simple filtration during an epidemic of abdominal typhus and injected under the skin of a dog, produce in certain cases the principal clinical and anatomical phenomena of typhic infection.

2. The anatomical lesions of this experimental typhus are ulcerations of Peyer's patches, infiltration of the mesenteric ganglia and swelling of the spleen. It is chiefly in the tissues which constitute these organs that one finds the microphytes mentioned above.

3. The infection of typhoid can be produced by means of the transfusion of blood of an infected animal to a healthy one, and, in this case, the poisoning is at its intensity.

4. The typhic virus, even when it is injected under the skin, has always an elective action upon the digestive tube, without our being able to explain this localization.

5. In the experiments of M. Tizzoni, the results were negative in the following cases:

(*a.*) When suppuration, at the point where the injection was made, destroyed and eliminated the injected germs.

(*b.*) When the matter injected had been extracted after the disappearance of the epidemic.

(*c.*) When the liquid had been enclosed for two months in distilled water in a close vessel.

(*d.*) When the vegetable microbia contained in the liquid of injection no more presented any movement.

These discoveries have considerable practical importance which will escape no one. In fact we may deduce from them the following consequences:

1. By filtration of water in time of epidemic, we can diminish if not completely remove the dangers of infection.

2. Purgatives, useful in the first period of the malady because they relieve the intestinal tube of the parasites which it is in the way of absorbing, can only injure later.

3. The parasitic nature of typhoid fever being recognized, the antiseptic method is found indicated by this same fact; and the author advises to introduce into the intestine itself the local disinfectant by means of the *enteroclysm* of Prof. Cantani. Ordinary injections would be insufficient.

Annali di Medicina e Chirurgia. L'Union Méd. March 6, 1881.

MASKED INTERMITTENT.

Dr. Surès of Djeddah, has noted a number of cases of masked intermittent fever in different localities. One, observed at Versailles, in 1871, was that of a man who had suffered with a rebellious chronic diarrhea for over seven years, since a residence in Mexico. He stated that he had lived in a low section of country there, and that he was the only one of the company who had not suffered from intermittent fever. A gram (15 grains) of sulphate of quinine arrested this obstinate affection. It recurred after a few days, but yielded finally to the same remedy employed with a little perseverance.

Another case of peculiar interest was one observed in India. This patient had also suffered for seven years with frequent attacks of hemoptysis, irregular and so abundant as to have reduced him greatly in strength and flesh. He was a man of twenty-nine years of age. Dr. Surès, seeing him in consultation, expected to find evidence of grave disease in the subclavicular regions. Nothing of this kind, however, was discovered. There was the normal resonance beneath the clavicles, but on percussing the spleen and liver, it was found that they were greatly enlarged. From the history of the case it was found that the young man had had repeated violent attacks of intermittent fever, and his residence was in a peculiarly malarious

district. Sulphate of quinine, supplemented by infusion of quinquina in addition to sulphate of soda, according to Trousseau's method, was administered and, besides, hypodermic injections of ergotin. To relieve the nervous erethism, bromide of potassium was added to the quinine. A slight laxative completed the treatment, which resulted in absolute cessation of the hemorrhages in twenty-four hours. Five or six days after the commencement of the treatment there was an access of fever consecutive to slight constipation due unquestionably to retention of bile. Calomel was prescribed, but not taken. Twelve days afterwards the patient set out upon a long sea-voyage for the purpose of securing complete re-establishment of his health.—*Jour. de Méd. et de Chirurg Prat. March,* 1881.

Transplantation of Nerve and Muscular Tissue.—T. Gluck, in the *Arch. f. Klin. Chir.,* details his success in transplantation of parts of muscles in fowls. Gluck has already made known his successful experiments of transplantation of nerve structure. He cut out a small piece of muscle in the case of fowls and replaced the loss with muscle from the rabbit; in each instance the graft united, and often the muscular structure was preserved. In a second series of experiments a piece of the gastrocnemius with its tendon was exsected and the deficiency made good with a somewhat larger piece of the corresponding muscle of another fowl. Union took place, and forty days after the operation the muscle again exhibited its proper function. Active regeneration occurs only when the inflammatory reaction is reduced to a minimum. As the result of inflammation, the graft is converted into a fibrous mass. It may be expected that the results of these experiments will induce similar operations upon the human subject.—*Centralblatt f. Chirur.,* March 19, 1881.

SOCIETY PROCEEDINGS

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, March 28, 1881.—Dr. S. G. Moses in the Chair.

Dr. Nelson read a paper detailing two cases in which secondary cancerous growths in long bones had resulted in spontaneous fractures. (Vide page 406.)

Dr. Gregory asked whether microscopic examination had been made of the secondary growth in Dr. Nelson's cases. Being answered in the negative, he said that, as the result of careful study, he had formed the opinion quite decidedly that primary cancer of bone never occurs; so that, where he finds such a growth in bony structure, it is *prima facie* evidence to him that cancer is to be found elsewhere in the body. An interesting feature in this case was the development of the secondary growth upon the side of the body opposite to that in which the primary disease originated. The occurrence of cancer in bone tissue is somewhat rare; the epithelial cells, from which cancer develops, are large, not very mobile, and they are pretty sure to be caught and detained in the meshes of the lymphatic glands. It is sarcoma rather than carcinoma that usually develops in malignant disease of bone structure. The bones are developed from the middle germinal layer, the skin and mucous membranes from the outer germinal layer. The tissues developed from these germinal layers never interchange with one another. There is no exchange of types between the tissues developed from the different germinal layers.

Cancers are of the epithelial type; are formed by proliferation of epithelial cells. Consequently, primary cancer of bone would be something unique in pathology. If he should find a true cancer developed in a bone, he would be quite certain that it was secondary, and that a primary nodule would be found somewhere else in the body. He could conceive that the peculiar vice of the cancerous disease might overtake a

young cell, yet ameboid, of the epithelial type, the cell subsequently migrating into the connective tissue, there developing a cancerous growth. In this way cancer might occur in the connective tissue products, but still the origin would be in epithelial tissue.

Dr. Prewitt remarked that the term cancer is very indefinite, is used for any malignant, recurrent growth, whether affecting epithelial or other tissues.

Dr. Gregory said that it should not be so. From the standpoint of the pathologist, the distinction is clear. Malignant growths developing in connective tissue are sarcomata ; those developing in epithelial tissues are carcinomata or cancer. The character of the tumor depends upon the origin of the cells that form the growth. There may be sarcoma of the breast as well as carcinoma, according as the epithelial or connective tissues are affected. Or, on the other hand, both tissues may be involved, and then the growth is named according as one or the other tissue predominates.

Dr. Papin asked how we may distinguish between sarcoma and carcinoma in the commencement of the disease.

Dr. Gregory said that practically there is no distinction. From the standpoint of the surgeon, it is of little moment which tissue develops the malignant disease ; but from the standpoint of the pathologist, the distinction is a valid one and interesting.

Dr. Papin said that some years ago he was called to attend an old Irishman who had received an injury of the leg. A piece of wood had struck him upon the shin, and a morbid process had developed there which would not heal. A growth had developed which had practically amputated all but the skin and some connective tissue. He had considered it primary bone cancer. It might have been some comfort to his patient, if he had told him that he had not cancer—only sarcoma of the tibia.

Dr. Gregory maintained that this was only an additional illustration of the ground that he had taken. The injury which this man received affected the skin as well as the periosteum and bone, and probably, if the growth was cancer, it originated in epithelial tissue, grew into and through the bone, causing the amputation that Dr. Papin had described. The tumor may have been malignant sarcoma. Cancers are always relatively

small and grow inward; they do not form large external masses. The cancer must have started in the epithelial layer. There is a case on record where there was a cancerous tumor of the tibia. In this case, however, an atheromatous sac had previously been imperfectly removed, and the proliferation began in the remains of the sac and grew in the direction of the bone.

Sir James Paget speaks of an osteoid cancer, and describes it at considerable length; but more recent investigations are not in accord with this great authority. As regards malignancy, carcinoma does not stand in the first rank. The cells of connective tissue are more active than those of epithelium. The round-celled sarcoma is a mass of vicious cells, with no stroma at all; and the cells are so very mobile that it is by no means uncommon to find real fluctuation in round-celled sarcomata. This is often a source of mistake, even on the part of skillful surgeons. Now, these readily mobile cells pass without difficulty into the blood vessels which have very thin walls, or no walls at all, or are taken up by the lymphatics, and so are carried away to distant parts of the body, and there become foci for the development of secondary growths.

Cancers are in the second rank as to malignancy. They consist of a stroma, in the meshes of which are huddled masses of cells. The vessels are situated in the stroma, and are much better developed than those of the sarcomata; and, consequently, the cells cannot so readily enter the blood vessels. The secondary cancerous growths are found in the course of the lymphatics proceeding from the part affected. Lymphatics have been traced into these cancerous growths, and the results of modern histological investigation tend to show that all parts of the body are in direct communication with the lymphatic system.

An interesting question, which had often occurred to his mind, was that as to the relation of the stroma to the cancer. If all the vicious elements, all the cells of a cancerous growth, could be separated from the stroma and this left clear, would this, the stroma, cease to grow? Then, again, what relation do the vessels bear to the morbid growth? The vicious elements do in some way affect the supply of blood to the part. This unnatural activity of cell life and growth stimulates an increased flow of blood to the part, and this, in turn, supplies material for more rapid cell proliferation. If these cells could

all be taken away, what would be the effect? Would the morbid action terminate at once? Are these growing, multiplying cells the sole factors of malignancy? These are questions that are not likely soon to be solved. We know that with warts, if we can dispose of the horny, epithelial redundant parts, the connective tissue parts disappear too; and they sometimes drop off of themselves, or disappear most mysteriously.

CROUPOUS BRONCHITIS.

Dr. Glasgow presented a specimen of bronchial casts which had been expectorated by a patient, of whom he gave the following history. A woman of middle age was taken with a violent cough in the fall. On laryngoscopic examination he found a subacute laryngitis which he considered to be the cause of the cough, and treated accordingly. The attacks of coughing were not frequent and were short, but always occurred at bedtime, and on rising. As the laryngitis disappeared, the cough grew worse, and some paroxysms would continue fully three minutes at a time. There was no expectoration. About Dec. 1st she coughed up a plug of fibrin, of the size of the first joint of the little finger. She had a good deal of mental disturbance at this time, was sure that she was going to die, complained of chilly sensations up and down the spine and of hot flashes. Every four or five days she would cough up these plugs. About Christmas these began to come more freely, and the patient felt better; there was less depression. The paroxysms of coughing still continue; there are now, perhaps, a dozen of them during twenty-four hours. In none of the casts which have been thrown off has there been more than a single branch; a slight hemorrhage has occurred several times.

No treatment has been laid down for this affection. All that has been done in this case has been tentative. In the first place inhalations were used of lime, tar and carbolic acid. These seemed to have some effect in loosening the plugs, and causing them to be thrown off somewhat more freely. Potassium biniodide had been given on account of an old history of syphilis. A month ago she commenced the use of pilocarpin in doses of $\frac{1}{20}$ of a grain every five hours. This produced considerable constitutional disturbance, flushing, heat and sense of impending death. The paroxysms of cough occurred less fre-

quently; and the plugs became softer, sometimes seeming to consist of a mucoid substance. It produced no sweating nor salivation nor effect upon the heart's action. It stopped the creeping, chilly sensations which had been so annoying at first; and the patient claims that she feels better than she has done for years. The pilocarpin now seems to have lost its effect when given in reduced doses.

CEREBRO-SPINAL MENINGITIS AND TYPHOID FEVER.

Dr. Saunders reported a case in which, at the fourteenth day of typhoid fever, there had been characteristic symptoms of cerebro-spinal meningitis. The disease had not presented violent symptoms.

Dr. Papin had seen a very similar case in which, after three weeks of typhoid fever, opisthotonos and other symptoms of cerebro-spinal meningitis had developed and continued for four weeks. One fact of interest was, that while the spinal symptoms were prominent, the intellect was perfectly clear; but as the spinal symptoms abated, the intelligence became more impaired. For the last week the patient has been convalescent, though the intellect is still much affected. He had found large doses of quinine the most successful treatment. On the suggestion of Dr. Curtman he had tried curari in doses of $\frac{1}{10}$ of a grain every three or four hours. He was not sure whether this had any effect or not, for he had given the quinine at the same time, as much as sixty grains in twenty-four hours. He had given the curari in orange-syrup. Beef-tea and cream were given frequently and regularly.

He had also seen a child who had cerebro-spinal meningitis with symptoms of typhoid fever at the same time.

Dr. Saunders had seen eight cases since March 1st, two of which had terminated fatally. Two cases had paralysis of the muscles of deglutition. Tympanitis had been a marked symptom. In general, these cases had been situated in most unfavorable hygienic surroundings and the infant was very badly nourished. He had used ergot, bromide of potassium and quinine.

CARBAMIDE OF QUININE.

Dr. Saunders called attention particularly to the carbamide of quinine, double chloride of quinia and urea, which he had

found very valuable for hypodermic injections. He had found it thoroughly efficient, and at the same time perfectly non-irritant. He had first seen it spoken of in a paper in the *New York Medical Record.* He gives it in doses of five to ten grains to an adult.

Dr. Robinson stated that in a case of cerebro-spinal meningitis which he had seen recently, there had been an unusual symptom. The child, about ten years of age, had a remarkable polyuria. He himself measured the quantity of urine passed in one period of twenty-four hours; and found that there were ninety ounces. The urine was clear and limpid, and had a specific gravity of 1008. He had given iodide and bromide of potassium and ergot, as treatment. The child recovered.

Stated Meeting, April. 11, 1881.—Dr. Hardaway in the chair.

CEREBRO-SPINAL MENINGITIS.

Dr. P. G. Robinson, in response to some questions of Dr. Gehrung, said that as to the pathology and morbid lesions of cerebro-spinal meningitis he had had few opportunities of making personal observation. He considered it an inflammation of the meninges of the brain and cord, and in five cases which he had the opportunity of examining post mortem, the most characteristic evidences of inflammation were at the base of the brain and about the medulla oblongata. There was not merely a condition of congestion in the membranes but an effusion between them. In three cases this was of a serous nature; but in two it was sero-purulent or purulent, so far as he could judge without microscopic examination, which under the circumstances was impossible. The color, density and opacity indicated the presence of numbers of white corpuscles. In these cases which were those of soldiers in the army, as well as in those cases which he had seen in general practice since that time, he had noted the absence of any rule as to character or order of phenomena observed in the development of the disease. In some cases the disease develops with startling rapidity, even terminating fatally in forty-eight hours or less, while in other cases the development is gradual, dragging along for weeks, and some then resulting in death from marasmus. According to his observation the earliest symptoms are ordinarily subjec-

tive, the patient complaining of violent headache, often of photophobia. Usually there are no violent objective symptoms in the onset, no chill nor any spasmodic action of the muscles of the back and neck which occurs later. There is no relation between the intensity of the fever developed in this disease and the result to be anticipated. He had seen cases in which there was violent fever, that terminated favorably, and those attended by very moderate fever, which had resulted in death, and *vice versa*. In some cases vomiting is a prominent symptom, but he thought it usually occurred later in the course of the disease. There are no pathognomonic symptoms of this disease; the whole group of symptoms must be taken together in making the diagnosis. He believes that it is to be attributed to an epidemic influence—has seen no reason to believe that it can be referred to malaria; on the contrary has observed that it ordinarily occurs in winter and in the severest cold weather when malarial influences are inactive. He has never seen anything to indicate that it can be classed among the preventible diseases, like typhoid fever.

Dr. Todd suggested that the fact noted as to the occurrence of the disease during cold winters might be one of considerable importance with reference to the etiology of the disease, on account of the depressing influence exerted upon the nervous system by the action of cold.

Dr. Robinson stated that in the treatment he relied upon the iodide and bromide of potassium and fluid extract of ergot, to a child of ten years giving ten grains of the bromide and five grains of the iodide with ten minims of the ergot every three hours. In answer to a question by Dr. Leete, he said that he had not observed that precocious children were any more susceptible to this disease than others.

Dr. Prewitt said that he had seen a good deal of this disease, and that he had observed the fact already noted, that it is likely to prevail during the latter part of unusually severe winters. We don't know what the cold has to do with it; in fact, we know nothing as to the causation of the disease. He believes it is of specific nature, just as are scarlet fever, measles, or small-pox. In the post-mortem examinations which he had seen, there was an exudation of inflammatory lymph especially at the base of the brain. The first symptoms, as

he had observed the disease, are an intense headache, and generally vomiting, which is of somewhat peculiar character, a sort of out-gush of the contents of the stomach. He thought there was no uniformity as to temperature; in some cases the temperature is very much elevated, in others very little. In the early stages of the disease the pupils are generally contracted, with later a tendency to dilatation. Opisthotonos is a common symptom, though not constant, as has been stated by some. In all cases however, he thought there was more or less rigidity and soreness of the muscles of the back of the neck. As to treatment, there is no specific. In the very outset of the disease, cupping is sometimes of service, but only in the very commencement. Later it is likely to be injurious. The same is true as to the application of ice. He found quinine of advantage, though he did not consider the disease of malarial origin, as it does not prevail in malarial climates nor in the season when malaria is most potent. Quinine has the power of preventing the migration of white blood-corpuscles, and in this power, perhaps, may be found an explanation of its efficacy in this disease.

Another phenomenon of this disease that had not been mentioned was that from which it had received the name of "spotted fever." In a certain proportion of cases there are purpuric spots upon the surface, sometimes blebs filled with bloody serum. He had seen cases where these spots were apparent on the whole surface of the body, and others even terminating fatally without any of these appearances at all.

He did not consider the disease contagious. In two instances he had seen a mother and several children swept away; but he considered this the effect of epidemic influence, not of contagion. Persons visiting the patients do not contract the disease, but those who live in the same locality, or members of the same household. He had seen cases of very mild type in which the symptoms hardly warranted the diagnosis, and believed that when an epidemic of this disease is prevailing, there are numbers of cases which are not called by this name, but are really of this character, and due to the same influence; just as when an epidemic of scarlatina or cholera prevails, there are some cases of those diseases that are so imperfectly developed that they would not be diagnosticated but for the severe cases occurring at the same time.

Dr. Gehrung stated that some years ago, while living in Denver, a disease prevailed in the surrounding country and in the city, which presented ill-defined symptoms, and followed in the wake of the epizootic, which affected the horses so universally. It had seemed that the poison of this disease was having an effect later upon the human system, which, with the progress of time, resembled more and more cerebro-spinal meningitis. Last fall he had ventured to predict the occurrence of cerebro-spinal meningitis, when he observed the prevalence of the epizootic at that time. Very few of the cases which he saw in Denver were as well developed as those described by the preceding speakers. There was no opisthotonos; headache was a constant symptom; nausea and vomiting were generally present; pain in the back and limbs was frequent; in many cases the purpuric spots were observed. Some patients died, some recovered with permanent loss or impairment of sight, hearing, etc. There was great variety in the development of the symptoms. In some there was high fever, in others very slight. In some cases the course of the disease was rapid, in others slow. He himself was one of the first persons attacked by the disease. For some days he suffered from symptoms like the prodromata of typhoid fever. He had a distressing headache, nausea and an aching pain from the loins down, as if the lower part of the body were compressed in a vice. Morphia, opium and bromide of potash were administered liberally, but gave no relief. Finally he called for hot applications, which were made to the spine and back of the head with cloths, hot irons and bags of hot sand. This treatment gave prompt and efficient relief to the intense pain of the head and back, and produced copious perspiration and sleep, and his recovery progressed favorably but slowly from that time. Other members of his family and other patients about the city were treated in the same mode, and the severe pain and distressing nausea were promptly relieved by the hot applications. It would seem that the disease is not an inflammation *ab initio*, but rather a condition of anemia of the nerve centers, like that present in the first stage of intermittent fever, and that the inflammatory symptoms result from the reaction. When heat is applied to the spine in the outset of the disease, while the extremities are cold, they will become warm and all the abnormal symptoms will disappear.

Dr. Michel asked how the reaction produced by the effect of the hot applications to the spine differs from that which occurs spontaneously?

Dr. Gehrung said that if the anemic condition continued for a considerable length of time, the reaction was likely to be excessive and to produce inflammatory conditions; but if the heat was applied early, the reaction would be mild, and no inflammation would be excited.

Dr. Michel was hardly prepared to accept this explanation; thought that a condition of anemia existing for a few hours, as in these cases, could hardly effect such changes. At most it would only be a partial anemia, producing only a diminished nutrition.

Dr. Gehrung.—There is a poison also of a somewhat similar nature in congestive chills. If we can explain the pathological process in the one case, we shall have taken a long step toward the explanation of the other also.

Dr. Robinson had no doubt that the treatment suggested by Dr. Gehrung had been very beneficial and helpful in the relief of pain, and thought there might probably be anemia in the onset of the disease, but could not see how any local applications could effect a cure of a specific disease such as he believed this to be. Of course the hot applications to the spine would have the effect of drawing the blood to that part. This might have a favorable effect upon the paroxysm of intermittent fever, but he could not understand how this could have a *curative* effect in that disease either. The most potent and reliable agent that we know of with which to combat intermittent fever is quinine. Other remedies have some favorable influence, but we always recur to quinine even in preference to other cinchona alkaloids. We must look for some specific against cerebro-spinal meningitis, and he was disposed to accord some specific influence to the iodide of potassium. Certainly it is one of the most efficient eliminators that we possess. It has been found the best remedy for use in lead poisoning, to eliminate the lead; and in scarlet fever too he had found it most efficient. It maintains the action of the kidneys and promotes the removal of the poison from the blood. Jaborandi, too, was a remedy from which advantage is to be expected by virtue of its eliminative power. Bromide of potassium should be given

to check the violence of the congestion and moderate the inflammatory action. A certain amount of benefit in the relief of suffering might be expected from the applications of heat, as suggested by Dr. Gehrung, but he should have little confidence in it to relieve a specific disease. Quinine would commend his confidence more than local measures by virtue of its power to arrest the migration of the blood corpuscles, but would not have any influence over the materies morbi, as it does in pyemia or septicemia.

Dr. Gehrung called attention to the fact that these hot applications excite profuse sweating, and thus cause an eliminative action, and this action takes place not only through the skin, but through the kidneys as well, the flow of urine being notably increased by this treatment. In fact he thought that its action in both these regards was more efficient than that of most of the medicinal agents that had been mentioned. As to the analogy between this disease and malarial disease, he would note that both the jaborandi and the local treatment with heat had been used with success in the treatment of intermittent fever.

Dr. Robinson admitted that if this treatment promotes elimination it was of more value than he was disposed to allow to it at first.

Dr. Glasgow stated that the result of the observations made at the Sisters' Hospital with reference to treatment of intermittent fever by the hot local applications, as suggested by Dr. Gehrung at a former meeting of this society, had been very satisfactory. One patient had left in two or three days because he thought he was not being properly treated, as no medicine was given him. The other case remained a week in the hospital, and there was no return of the chills. Tincture of gentian was given to this patient as a placebo. Profuse sweating occurred about a half hour after the application of heat to the spine. He had not followed out the observations because the expense of heating the sand with a gas stove was not far from the same that it would cost to pay for the quinine, and it involved a good deal more trouble.

Dr. Gehrung said that the degree of heat to be applied should not be such as to produce any sensation of burning, only such as to excite an agreeable warmth. It would be found that sleep for three or four hours would occur after the allaying of the pain by this treatment.

Dr. Glasgow asked what becomes of our ideas of specificity if it be true that such modes of treatment as those specified will cure intermittent fever?

Dr. Robinson does not believe that they do cure the fever in the same sense that quinine does. Some of these remedies may act as eliminants of the poison. Iodide of potassium might be a very good treatment for intermittent fever by reason of its eliminant power. In many cases he had no doubt the poison is eliminated by the powers of the system, especially when a patient moves from a malarial to a salubrious region. We know, also, that mental impressions have a decided influence. In the old times it was not uncommon to set the clock ahead so as to impress the patient with the belief that the time for the paroxysm had passed.

Dr. Leete remarked that it is not necessary for a patient to go away from a malarial district in all cases, in order to rid himself of malarial poison. He had seen a case of tertian intermittent wear itself out in the course of two months, with no medicine, and another case in which the only medicine was moderately hard cider, which seemed to act by exciting pretty free diuresis.

Dr. Robinson called attention to the peculiarities of race with reference to susceptibility to malarial poison. A negro will become acclimated in the course of two or three seasons to malarial poison, while a white man will not do so. A negro going on to one of the southern rice plantations would probably have a severe remittent fever the first season; the next year he would have a tedious spell of intermittent fever, while the third year he would have only a few chills, thus exhausting the susceptibility to that form of disease. A white man, on the contrary, if he did not succumb in the first six months to malarial fever, would become a chronic invalid, with enlarged spleen and liver and the cachectic condition associated therewith.

Dr. Gehrung said he did not intend to be understood as advocating the local applications as a sole treatment, but as an adjuvant to such other remedies as might be approved.

Dr. Glasgow said that since Dr. Gehrung first called the attention of the society to the effect of hot local applications in equalizing the circulation, he had experimented some with this

mode of treatment in cases of progressive phthisis, where there were slight chills in the morning. Quinine seemed to have little or no effect in controlling them, but he had found the effect of the local application of heat to be most happy.

Dr. Leete had been deeply impressed with the importance of a correct diet for persons living in malarial regions. It should be simple but nutritious. Had seen northern people move into malarial regions of the South and maintain perfect health by a careful observation of hygienic rules and living on simple diet.

Dr. S. G. Moses said that when he commenced the practice of medicine in New Jersey he suffered from a long and persistent attack of intermittent fever. He took quinine in large doses; was one of the first persons in America who did so, as quinine was a new thing then. The quinine was insufficient to break up the fever. He took a trip to Philadelphia, his native city; was gone a week, and from that time has never had a chill, though he has taken no precautions, and had been greatly exposed, both in his early days of practice here, being often obliged to ride at night over the bottoms on the other side of the river, and during the war, when he went south in the very sickliest season of the year, and took no precaution against exposure. When he was living in New Jersey a new railroad was in process of construction near where he was residing. Many of the workmen lived in a low swampy region and suffered much from malarial poisoning. An Indian doctor there had great success in the treatment of these affections. His treatment was so conducted as to make a most profound mental impression. It had to be instituted at a certain phase of the moon, at a fixed hour of the night. A pit was dug and the patient buried in it to his neck. Then certain incantations were pronounced and the patient was informed that his disease had disappeared, which generally proved to be true. He should doubt the reliability of the hot applications in cerebro-spinal meningitis for anything further than an alleviation of the pain. He saw many cases during the war. In cases where he had seen post-mortem examination the effusion had been chiefly at the base of the brain. In some cases death occurred very suddenly; in some, sequelæ had been most serious. In one case a boy recovered from the disease, but never recovered from a paralysis of the lower extremities.

TWELFTH CONGRESSIONAL DISTRICT OF MISSOURI MEDICAL ASSOCIATION.

The semi-annual meeting of this association was held in Hannibal, April 13th and 14th, 1881. At the first morning session thirty-seven members were enrolled, and letters were were received from eleven others, expressing their regret that they could not be present.

At the afternoon session, Dr. W. O. Torrey, president, being in the chair, the order of business was suspended and Dr. W. A. Byrd, of Quincy, Ill., delivered an address on abdominal surgery, and reported some interesting operations. Dr. Byrd was made a member by invitation on motion of Dr. Downs. Dr. Downs reported an interesting case of vesico-vaginal fistula, with successful operation for the same.

A paper was read for Dr. Murdock, reporting cases of disease of the jaw bone, caused by decayed teeth.

A biographical sketch of Dr. J. E, Hope, a member of the association, who died since its last meeting, was read by Dr. E. D. Helm.

In accordance with a resolution of the association an open evening session was held in the hall of the Park Hotel, which was beautifully arranged for the occasion. The programme for the evening was as follows

Prayer by Rev. M. Edgar. Addresses of welcome by Mayor Munger and Rev. Dr. Henderson, which were responded to, on behalf of the association, by Dr. E. D. Helm. Dr. T. J. Norris read a paper on the objects and utility of medical organization. Dr. E. D. Helm read an original poem on death. Miss Hart and the Misses Martin furnished some very choice piano music, and, by special request, Miss Helm, of Quincy, gave several choice selections in dramatic readings and impersonations, which were highly appreciated by the audience. The whole affair was a very pleasant one, and will help the cause of medical organization.

Morning session, second day, Dr. Neiper, vice-president, in the chair.

Dr. John Downs read the report of an interesting case of compound fracture of the tibia and fibula. Other interesting cases were reported after a discussion of the cases reported,

and the transaction of informal business, the association adjourned to meet at 2 o'clock p. m.

Afternoon session, Dr. E. D. Helm, vice-president, in the chair.

Dr. J. W. Norris reported a case of psoriasis, which led to an interesting discussion on the subject. A peculiar case of dislocation of the shoulder joint was reported by Dr. Clayton; also a case of gun-shot wound, reported by Dr. Clayton; also a case of dislocation, reported by Dr. Neiper; a case of wound of the abdominal wall was reported, involving extensively the peritoneum.

An interesting paper was read by Dr. John Moran, on menstruation; also, a well written article was read by Dr. John Downs, on rest in the treatment of disease.

The session was closed with the discussion of uterine displacements, in which Drs. Morrow, Hay, Clayton and J. W. Norris took part.

On motion, the following delegates were chosen to represent the District Association in the State Association:

Samuel Neiper, M. D.; E. Jeserich, M. D.; B. J. Milam, M. D.; B. S. Crawford, M. D.; C. F. Clayton, M. D.; W. F. Morrow, M. D.; E. C. Hay, M. D.; J. W. Pryor, M. D.; J. C. Hearne, M. D.; J. W. Norris, M. D.; C. F. Dawson, M. D.; John Downs, M. D.; T. J. Norris, M. D.

On motion, the thanks of the association were returned to the Bliss Brothers for their kindness; also to J. C. Hearne, chairman of committee of arrangements, and to the city papers.

Drs. T. J. Norris, E. Jeserich, B. J. Milam, W. F. Morrow and A. T. Levick were appointed a committee of arrangements for the next meeting.

The association adjourned to meet at Macon City, October 26th, 1881. W. O. Torrey, M. D., President.

T. J. Norris, M. D., Secretary.

Our Report on Progress, as well as the Proceedings of the Obstetrical and Gynecological Society, are crowded out this month by the pressure of other material

SELECTIONS.

DIFFERENT FORMS OF ANEMIA.

Each one of the different forms of impoverishment of the blood caused by different diseases, has its own way of manifesting itself in the countenance. An anemia that is caused by renal disease is characterized by whiteness of the skin of every part of the body alike; so that the face, the ears, the eyes, the hands, the arms and the whole surface of the body present a uniform chalky whiteness of the skin. But that is not at all characteristic of the anemia of phthisis. The anemia of phthisis, at most excepting the last stages, presents this difference from anemia arising from other diseases, namely, that there are certain parts of the body which show redness, as the mucous membranes. There is one other kind of anemia of which this is true, but it is particularly so of the anemia of phthisis. The skin of the face usually, particularly toward the latter stage of the disease, shows a redness, most marked on the malar processes, shading off on the cheeks. But the thing most characteristic about the anemia of phthisis pertains to the conjunctiva. The conjunctiva in the anemia of Bright's disease is dull (not injected); it is white, but dull. There is nothing characteristic about it, only that you see it is not suffused. In phthisis, on the other hand, it is characterized by a polished, glossy appearance, from the fact that phthisis early removes, apparently, every particle of the fatty tissues about the eyes, and causes an exceedingly transparent conjunctiva. Mind you, it is not the pupil that has the clear, polished, glossy look, but the conjunctiva. In another kind of anemia, which is frequently present, anemia from hepatic disease, the patient is pale, and the mucous membranes are pale; in this latter respect the opposite of what is true in phthisis; and the conjunctiva will be more or less yellow, and sometimes even a yellow spot raised, like a blister, will be seen on the conjunctiva. In that respect the anemic appearance of

the conjunctiva in hepatic disease differs from that of Bright's disease or of phthisis. Then there is the anemia of chlorosis. Now, that is characterized by a greater whiteness of the mucous membranes than is any other kind of anemia. The mucous membranes are so white in many instances that the lips look as if they were a part of the face, having almost the same color. The conjunctiva is also white, but it is not so glossy as it is in phthisis.—W. H. Thomson, in *Md. Med. Jour.*, March 15, 1881.

NOTES AND ITEMS.

We have been greatly annoyed by observing that a certain manufacturing chemist of New York City has introduced into the advertisement of one of his preparations what purports to be a commendation of the same by the Courier of Medicine. Dr. Love informs us that the certificate, which was given after he had withdrawn from any active connection with the management of the Courier, was written on a sheet of paper with Courier letter-head upon it, which was lying upon his table when called upon for a testimonial, but was simply his *personal* certificate.

When he observed the use that had been made of it he wrote to the parties requesting them to expunge the "Courier" heading to the certificate, and received from them the assurance that in future publications this request should be complied with.

Inasmuch as they have just issued a new circular and have repeated the publication of the certificate as from the Courier, we feel obliged to make this statement in order to protect ourselves from the charge of inconsistency, as our principle and practice is not to give testimonials or certificates with reference to any preparations or appliances.

The lawsuit of Geo. P. Putnam's Son & Co., against Leo. T. Meyer and others, with reference to the publication by the latter of the material which constitutes the principal portion of the volume entitled "The Essentials of Anatomy," which was published by the plaintiffs under an arrangement made with

them by Drs. Darling and Ranney, has been decided in the Supreme Court of the state of New York, by a decree in favor of the plaintiffs. The decree grants to the defendants only the right to sell their edition of the book to students of medicine in attendance upon the lectures of Dr. Darling, and reserves to the plaintiffs, the Putnams, the sole right to publish and sell elsewhere the book or the matter in printed form, which gives the book its particular value.

In the foot-note to Dr. Prewitt's table of cases of gastrostomy published in our March number, credit is given to Dr. Pool for report of eighteen of the cases instead of *Dr. J. H. Pooley,* of Columbus, O., who was the author of the paper referred to.

Literary Notes.—Henry C. Lea's Son & Co., will soon issue a "Treatise on Midwifery," by Dr. Theophilus Parvin, of Indianapolis. It will be an octavo volume of about 500 pages, fully illustrated. A "Practical Treatise on Impotence, Sterility and allied disorders of the Male Sexual Organs," by Dr. Samuel W. Gross, is also promised at an early date. Dr. S. Weir Mitchell's "Lectures on Diseases of the Nervous System, especially in Women," is announced, as well as Prof. Bartholow's "Practical Treatise on Electricity and its Applications to Medicine."

J. B. Lippincott & Co. are preparing the third volume of Prof Agnew's Surgery, of which the second volume has just been published.

D. Appleton & Co. have in preparation a volume by Dr. Ambrose L. Ranney, "The Applied Anatomy of the Nervous System."

Congress appropriated $10,000 for publishing the second volume of the Index Catalogue of the library of the Surgeon General's office. This will about cover the cost of type-setting and stereotyping.

The American Journal of Obstetrics will hereafter publish in each number a condensed report of the minutes of the London Obstetrical Society. The editor aims to make the journal one of international character, and has secured the active co-operation of some of the leading British gynecologists, and thereby will be enabled to give greater interest and value to this most successful special journal.

"The Pathologist" hails from Brooklyn, New York. It comes without announcement of the name of the editor, but is evidently in charge of one who writes ably and will discharge the onerous duties creditably. Success to the new journal.

The Rocky Mountain Medical Review has removed to Denver, Colorado.

"The Microscope" is edited and published by Dr. and Mrs. Stowell, of Ann Arbor, Mich. Microscopy and its relations to medicine and pharmacy are the subjects to which this journal will be devoted. We wish it all prosperity.

"Western Lancet."—With the March number W. S. Whitwell, A. M., M. D., assumes the editorial management of this journal, taking the place of Drs. Perry and May.

The Toledo Medical and Surgical Journal no longer comes as a welcome exchange to our table. We sincerely regret that the editors and publishers have been obliged to suspend its publication for lack of the substantial support which their really able efforts merited.

Dr. Isaac Ray, well and widely known as a practitioner and writer in the field of mental disease, died on the last day of March last, at the age of seventy-four. During many years he held important and responsible positions as superintendent of large institutions for the treatment of the insane, and stood *facile princeps* as an authority upon insanity and nervous disease.

Dr. Richard O. Cowling, editor of the *Louisville Medical News*, died of endocarditis, Saturday, April 2, 1881, aged 42 years. He had remarkable ability as a physician and as an editor, and had a great many strong friends. His death is a great loss to the profession at large, as well as to the community in which he filled so prominent a place.

Dr. Sanders, Professor of Pathology in the University of Edinburg, recently died in that city. His death is a deplorable loss to scientific medicine.

Curability of Cancer.—Professor Richardson teaches the local origin of cancer and the thorough extirpation of the growth and the adjacent healthy tissues as the proper mode of treatment. He believes that eighty-five to ninety per cent. of

epitheliomata and scirrhous cancers, upon which he has operated, have been permanently cured.—*N. O. Medical and Surgical Journal*, March, 1881.

Rattlesnake Bites.—Barrows states that the Indians have an unfailing antidote for the poison of rattlesnake bites. They scarify the wound to the bottom and fill it with salt.—*N. Y. Med. and Surg. Journal*, August, 1880.

The Skill of one Physician over another consists: First of all in his quickness to perceive which organ he can most readily and most beneficially influence, to the ultimate benefit of its neighbors; and next in the extent of his armory—the number of weapons, be they drugs or diets, which he has at his command, and the dexterity with which he can employ them.—*From The Heart and its Function.*, p. 31.

India-Rubber and Gutta Percha Instruments that have become brittle by exposure to sunlight may, it is said, be rendered again flexible by immersion for a few minutes to a half hour in a mixture of one part of liquor ammoniæ with two parts of water.—*Med. Press and Circular.*

Turnersville, Tex., April 23, 1881.

Messrs. Editors: Some time in the summer of 1879, I was called to see a cow-boy, in the county of McClennan, who had been in the saddle eight days, with a severe bilious remittent fever. I found him a very sick man; prescribed mercury quinia, and as a febrifuge tincture of gelseminum in twenty drop doses every four hours. On the next evening I found entirely free from fever, and so utterly relaxed that he could scarcely open his eyes. I turned to the nurse, an intelligent man, and asked him how often, and in what doses he had given the gelseminum? He replied that he had given him a teaspoonful every four hours. I watched my patient through the night, stimulated him, and he made a good recovery. I would not trouble you thus, but I see in your valuable journal for this month, a discussion in which Drs. Hardaway, Gehrung and Carson *touch it lightly.* I have used it for years in the States of Arkansas and Tennessee, and never have seen it do any harm, although I have found it a fair oxytocic, perhaps.

Yours respectfully,

T. DUKE WILLIAMS, M. D.

ST. LOUIS
COURIER OF MEDICINE
—AND—
COLLATERAL SCIENCE.

VOL. V. JUNE, 1881. NO. 6.

ORIGINAL ARTICLES.

CANCER OF THE STOMACH.

BY P. GERVAIS ROBINSON, M. D., *Professor of the Practice of Medicine and Clinical Medicine in the Missouri Medical College.*

A CLINICAL LECTURE.—REPORTED BY S. T. ROBINSON, M. D.

GENTLEMEN—I introduce to you this morning a patient who, I am told, is suffering from some abdominal trouble. I proceed to question him, and we learn that his name is Mike Carney; that he is forty-five years old, is single, has been a worker in a blast furnace, has not led a very regular life, occasionally drinking very hard; and that he has been an inmate of the hospital for two weeks. He tells us that his trouble is mostly in the belly; that he suffers intense pain in the region of the stomach, particularly at night and when he assumes an erect position. He first experienced the pain last fall, but after lasting for a while it gradually wore away, only, however, to return

again about eight weeks ago. The pain has, I would understand from his description, definite paroxysms or exacerbations of intensity, during which it extends, he says, clear through to the back bone. In connection with this symptom he speaks of attacks of vomiting, but declares that he has never had the slightest trace of hematemesis. His bowels are regular, appetite fair, no constipation, no diarrhea, and no bloody discharges.

Thus we have ascertained the presence of certain symptoms which immediately direct our attention to the abdominal cavity as the probable seat of the trouble, and judging from their prominent and distinctive character we are inclined to think that some gastric affection exists. However, let us place the man on a table and subject him to a physical examination, You observe I make him flex his legs and draw up his thighs that the abdominal muscles may be relaxed. Inspection first discloses a large scar across the abdomen, the result, he says, of a severe wound received at the battle of Vicksburg; his intestines protruded through the wound, but under good hospital care he recovered in four months. I do not think that this wound has any connection with his present trouble, but it is well to note the fact of its occurrence, as some remote relationship may exist. Perhaps you are surprised at the good recovery made by this man after such an ugly wound. It is true that a fatal result often occurs in such cases, but during the late civil war I witnessed perfect recoveries after wounds even more severe; nay, I have seen the happiest termination when the bullet or other missile could not be found or extracted from the abdominal cavity.

To return to our examination, we observe that the abdominal respiration of our patient is peculiar. The respiratory movements of the male are, as you know, most marked in the upper zone of the abdomen. In this man, however, they are in great measure confined to the right side. I make him take a deep inspiration, and you see the deep expansion gradually diminish from right to left, while

on the extreme left the parietes of the abdomen appear to be fixed. In other words, we might say that the respiratory movements are decidedly one-sided. Finally, I observe a slight tumefaction just to the left of the median line, but which perceptibly alters its prominence during respiration.

I now resort to palpation, and just below the ensiform cartilage observe nothing abnormal, but immediately over the tumefaction I discover a large tumor occupying the left hypochondrium. The tumor is a very hard, nodulated mass, quite irregular in its outline, and but slightly, if at all, movable. In fact, it seems firmly fixed.

Now I will endeavor to define its limits as near as may be possible. The right margin, although irregular, is in its general outline distinctly oblique from below upwards, extending above about two inches to the right of the median line and running down just to the left of the umbilicus. On the left side the tumor dips deeply beneath the hollow of the ribs, filling up the whole of the left hypochondrium, invading the region of the spleen and occupying the entire tract of the stomach. I place the patient on his left side, and the tumor, although from its size quite distinct, cannot be felt near so well. There seems to be thrown around it some folds of intestines. When I put him on the right side, the tumor becomes more prominent, but again there seems to have passed over its surface a fold or reduplication of intestine. It is well to understand how these folds of intestines may slip around and more or less enclose a tumor, as in many cases it is desirable for diagnostic purposes to pass in an exploratory needle. Of course, this should never be done except after careful study of any possible folds that may be thrown in the way. We also observe that there is no tenderness on touch over the tumor, and a complete absence of any inflammatory signs, but on deep pressure the man experiences some pain. And here I would advise you always to use both hands in palpation, taking great care to be very gentle at first, for you can never know whether or not severe pain may be induced. Especially is this caution necessary

in heart troubles. In pericarditis there is often intense pain, and if you are at all rude in the beginning, your patient becomes easily prejudiced against further examination.

As I place my hands immediately over the median line, midway between the umbilicus and the ensiform cartilage, I experience a distinct pulsation, having, however, this peculiarity about it: that its occurrence is just in the median line, extending neither to the right nor the left. These observations enable us to advance one step in our diagnosis. We are now justified in at once excluding the existence of an aneurism. We know that the pulsation can only proceed from the passage of the abdominal aorta beneath a solid tumor. Were an aneurism present, the pulsation would be expansive, that is, equal in all directions.

In answer to further inquiries he repeats that he has never suffered from piles, diarrhea or bloody discharges, points of some importance as you will presently see. He experiences no difficulty in swallowing, nor is he able to locate precisely at what time of day the attacks of vomiting occur most frequently. He complains of having had some slight pain in the region of the left kidney. He thinks that he passes his water a little oftener than formerly, and the urine is described as being high colored and containing free uric acid crystals. However, these latter signs are of no import at all as indicating any lesion of these organs, accompanied by such a tumor as we have here. Indeed, they are more justly accounted for on other grounds, as I shall presently show. The slight pain most probably was the result of pressure. Hence I think we can reasonably exclude any affection of the kidneys from the lack of symptoms either now present or offered by the history which would point to these organs.

Another point elicited from the history is that several years ago he suffered from chills and fever. It is possible then that this enlargement may be splenic, knowing, as we do, that such is often the result of malaria. On the other

hand, if this tumor was an enlargement of the spleen, there would also be present evidences of malarial toxemia. None such are present. The man says that he has long ceased to have the chills. So, also, he would have the peculiar dusky or earthy cast of countenance. His skin is clear, although he entirely lacks color. While he is undoubtedly very weak and seems broken down, yet the appearance of this debility is quite unlike what we are accustomed to see in malaria, and particularly in a malarial toxemia so profound as to produce such a large tumor as is present. In view of these facts I do not think that malaria has had any connection with this tumor; yet still, knowing the previous existence of a cause we must admit the possibility of the effect.

As I look at his gums, I observe that he has very few teeth; in fact, none at all in the lower jaw; he was salivated years ago, at which time they dropped out. I also ascertain that his mother had very bad teeth. I ask these questions, as sometimes there is a family peculiarity in this respect. I know of one family in this city who have no teeth at all, a circumstance which must be given due consideration in accounting for dyspeptic symptoms.

Now, as I rapidly examine the liver I find no enlargement, the line of dullness not extending above the nipple, nor below the lower margin of the ribs.

The important question in this case is one of diagnosis. What is the nature of this tumor which is so pronounced and so well developed? At first glance it might seem that diagnosis was easy in such a marked case, but the experienced practitioner knows that he can never be too certain. The difficulties of diagnosis are manifold, and are often sufficient to puzzle the maturest judgment. Here we have a portion of the body containing many organs, which possess functions not only widely divergent, but at the same time closely dependent the one upon the other for their harmonious workings. So long as they move in their normal physiological circle this inter-dependence is scarcely

realized; but the moment the action of any component member is disturbed, the entire machinery becomes clogged and the error of the one reacts upon the whole group. The connections of all centre mostly around the process of digestion; even the kidneys are intimately connected with the great work of the primæ viæ. Each of these various organs has its definite share in this great process, and they are all intimately connected with each other. Thus, the liver is, you know, in close relationship with the stomach and intestines. Any interference with its secretions or circulation has its proportionate effect upon the intestinal canal, and, we might say, is reflected upon the mirror of the stomach. Congestions follow, and vomiting of blood, of mucous or any other secretory matters almost always ensue. So also of the intestines. We know that hemorrhoids, ascites and melanotic stools may be indicative of cirrhosis of the liver. Or should there be a deficient oxygenation of the products formed in the liver, an excess of uric acid will probably appear in highly colored urine, precisely what occurs in the present case.

I make these statements to show you briefly the difficulties in the way of correct diagnosis. The indication here is that the tumor affects the stomach; not, mark you, so much through the strength of the direct symptoms, as by the absence or weakness of those which would point to the implication of any other organ. I do not think the spleen to be affected because of the hardness and fixedness of the tumor, its irregularity and its nodulated character; because no malarial toxemia now exists, and there is not sufficient evidence furnished by the history to show that it ever did exist, at all events of a type sufficient to produce this tumor. Finally, I do not think the spleen involved because I deem this growth to be a cancer, and the existence of a cancer is, in my opinion, more than enough to exclude any trouble of the spleen. I have never yet seen a primary cancer of this organ, although many cases of malignant disease have come under my observation, not only in

private practice, but during long visits to the largest hospitals, both of this country and Europe. The books all speak of the possibility of such occurring, but you will notice that no case of primary cancer of the spleen is ever mentioned. Not long since I had a patient in whom I believed there existed a cancerous degeneration of the spleen. She was of that pale waxy hue so characteristic of the advanced stages of cancer. There was no functional disturbance of the stomach or the intestines, or indeed, of any organ. The kidneys were excluded, as they seemed to perform their functions well and regularly. While a post-mortem confirmed the diagnosis of cancer, still it disclosed also that the stomach was the affected organ. The spleen was indeed firmly attached to the stomach, but only through the results of an adhesive inflammation. I make these remarks to show you that if splenic cancer ever does exist, how extremely rare it must be, and how strong are our grounds for excluding its presence in this case. Next, as I have already said, the kidneys are reasonably excluded. So also of the intestines. There is no derangement in the performance of their offices, no diarrhea, no piles, no bloody discharges; in fine, no intestinal disturbances of any kind as expressed by the quantity, quality or frequency of the stools. If this tumor were situated lower down, we might reasonably expect a stricture of the rectum or of some portion of the intestinal canal. So also the entire absence of any signs pointing to its implication enables us to exclude the liver. We observe no icterus. True, this is not a positive sign, but it is nearly always present in those cases where we would naturally expect some pressure to be exerted upon the biliary ducts, thus causing a reabsorption of the coloring matter by the blood. So also there is no enlargement of the organ, which we would certainly find if it were in a cancerous condition, for the greatest enlargement that the liver ever undergoes, occurs when it is the subject of malignant trouble.

Thus you see, it is by a process of elimination that we

have now only one organ to consider—the stomach. The symptoms pointing to this viscus are pain, vomiting and colic; not by themselves of so much strength, but by the absence of any such as would direct our attention to other organs; and conjoined with the presence of this tumor, so large, so hard and characteristic to the touch, they are sufficient to justify our diagnosis of cancer of the stomach. It is true that the symptoms are quite few, and you observed that it was with difficulty that we were able to make the patient confess their occurrence. He evidently desires to make light of them, and to induce us to underrate their importance; facts which give to them just so much more value in our opinion.

You remember he replied, in answer to a question, that he experienced no difficulty in swallowing. The tumor undoubtedly involves the cardiac portion of the stomach. In many such cases the lower part of the esophagus also becomes implicated with, sooner or later, a stricture in its caliber and consequent dysphagia. Oftentimes when such strictures exist, there is an enlargement of the tube just above the site, or a sacculation of the walls, in which the food lodges temporarily, to be shortly ejected, of course untouched by the process of digestion. And here I would pause to impress upon you the necessity of repeating over and over your questions in all doubtful cases until you are positively assured of the correctness of the replies. Subject not only the patient, but his near friends and relatives, those who are in daily observation of him, to cross-examination until you have thoroughly established the accuracy of all statements. Very often this is extremely important, for perhaps your diagnosis may depend on the correctness of a single answer. Especially is this true where there is any lack of physical signs, or where an organ is probably involved, such as the stomach, around whose physical examination there necessarily hangs much obscurity. I remember a case I saw in consultation with Dr. Bauduy, in which we diagnosticated malignant abdominal disease.

The tumor could not be well felt, and to locate its exact site, whether it might be toward the cardiac or pyloric extremity of the stomach, was not possible. I said at the time that my opinion would depend on his answer to one question, which was, "Did he ever experience any difficulty in swallowing or any vomiting shortly after meals?" The man declared that he had never been troubled in either way. I then stated that had he answered affirmatively, my diagnosis would have been that the malignant growth affected the cardiac extremity. After his death a post-mortem revealed this to be the region involved, and mention of my remark having been made to the widow, she immediately exclaimed that vomiting had been an almost constant sequence of the patient's meals.

In a case such as that we have before us, the symptoms and signs are, I think, sufficiently numerous and pronounced to leave no room for doubt as to the exact nature of the affection, as well as the exact seat of the disease. But we cannot attain to such exactness in a large proportion of cases, and are obliged to rest satisfied with an approximative diagnosis. The recognition of cancer of the stomach, then is by no means always easy, because we must differentiate between malignant tumors and several conditions which possess certain features in common. In other words the general and rational symptoms, may be identical in each of these several affections; and I would particularly call your attention to the fact that too much importance is not to be given to disturbances of function of the stomach as indicative of diseases of its structure, in as much as the most violent and obstinate reaction may be brought about in this organ simply through reflex influences having their starting point in various and distant parts of the economy through the agency of the circulatory or nervous systems.

We may instance various maladies of the nervous centers or functional derangements of the sympathetic system which so often produce persistent and obstinate vomiting, as in the several forms of meningitis, pregnancy, etc., or again

we may have congestion of the gastric mucous membrane more or less transient according to the nature of the primary cause, as the results of embarrassments to the circulation, either from organic lesions of the heart or of the chylopoietic viscera. The three mal-conditions of the stomach most likely to be confounded are chronic gastritis, simple gastric ulcer, and gastric cancer.

In each of these we have necessarily more or less impairment of the proper function of the organ, giving rise to the various symptoms which are included in the general and somewhat vague term dyspepsia. Thus, as a rule, we have at some period of their progress more or less pain, vomiting and anemia, as the result of the impaired nutrition; and the case may have advanced almost to a fatal termination before it can be said that there is anything characteristic in any of these phenomena or that we have to deal with any condition more serious than an aggravated dyspepsia. It is not always easy to say in any given case that the pain is due to a gastritis, to the presence of an ulcer, or to cancerous degeneration, and the same may be said of the vomiting and of the anemia.

Is there indeed any symptom or sign which is characteristic of malignant disease and which shall serve to distinguish it from those so closely allied?

The question is important especially in its relation to the possibility of prognostication, which on the one hand cheers and stimulates the patient with the hope of prolonged life, and even restoration to health, and on the other brings the sad tidings of a certain and not far distant death.

In answer, then, I may say that so far as my own experience goes, and I believe it is in accord with that of many others, we can never feel very sure that we have to deal with a cancer of the stomach until we can determine the presence of a tumor. We may have watched a patient through many months of suffering, we may have observed from day to day the progress of his case with the most careful study

and yet may not be able to say to him with confidence you have or have not a necessarily fatal disease, because we have not been able to feel a tumor beneath our finger. Now I say you may have pain of the most constant and distressing character, you may have vomiting persistent and frequently sanguineous, and even presenting the significant coffee grounds appearance, you may have the most extreme anemia and emaciation, and yet, if you cannot make out a tumor, you are not, in my opinion, justified in the diagnosis of cancer, because the same general phenomena mark as well the presence of simple gastric ulcer.

In any event then, the diagnosis of the disease in its earlier stages is only conjectural, in that period of its progress during which we are guided alone by the symptoms of dyspepsia.

The most confident diagnosis in such cases is made by those who know least in regard to the difficulties which surround the subject. When such a diagnostician as Trousseau has confessed so many errors of diagnosis in his most graphic and instructive clinics, we need not be ashamed to acknowledge our inability to arrive at greater excellence.

Yet though a tumor be present, it may not be felt, because its palpability will depend much upon the portion of the stomach affected and perhaps upon the posture of the patient at the time of examination. Thus when the pylorus, the anterior aspect or greater curvature are the seats of disease, the tumor is more readily discernible than when other portions are affected. In certain cases the tumor is quite movable and falls in and out of a palpable position according to the posture of the patient.

I well remember a case I had under observation a few years since, in which I failed repeatedly to discover a tumor and so was unwilling to say positively the disease was malignant, though there were present all the rational symptoms of cancer. I took my friend Prof. Gregory to see the case, but he too, failed, notwithstanding a well educated touch, to discover a tumor.

This repeated investigation set the patient himself to searching, and one day as I entered his chamber, he exclaimed, "I have found it, Doctor," and sure enough there it was, as plain as could be desired. The patient was lying upon his right side in a semi-prone posture with his legs flexed and the tumor fell forward into the epigastrium, so that it could be easily grasped by the fingers; turning upon his back the tumor fell out of position and disappeared.

And now that we have pronounced the case to be one of cancer, the treatment may be summed up in a very few words, as we believe there is but one termination to this affection, and all our efforts must be for the relief of pain.

The patient's diet must be such as to require least effort on the part of the stomach to digest and if the patient can be persuaded to live chiefly on milk he will suffer the minimum of discomfort. Medication is limited to the administration of such remedies as allay irritability and promote digestion and to the preparations of opium to relieve pain, and when we have done this we have accomplished all that is possible, and yet the news comes to us that the distinguished German surgeon Billroth has advanced a step farther and has actually excised recently in two cases the cancerous pylorus. The first case a month after the operation, which was performed in January of this year, was doing well; and we may yet live to learn that life may at least be prolonged by this bold procedure.

DYSMENORRHEA.

BY G. W. MOSS, M. D., PARIS, MO.

Read before the Moberly District Medical Association.

AMONG the derangements of the function of menstruation, probably none claim more attention from the physician than that known as dysmenorrhea; and while it is not specially dangerous to life, it is an ailment that so

undermines the constitution, and has such a depressing influence mentally and physically, that it demands our closest investigation and best directed efforts to restore this function to a healthy condition.

In nearly all women, even in health, there is more or less pain or discomfort at the approach of, and sometimes during the continuance of, the flow at each menstrual period, but this is physiological rather than pathological. I propose to treat in this paper more particularly of that form of painful menstruation which has for its origin some constitutional disturbance of the system, and shall exclude all cases of accidental obstruction, whether from flexures of the uterus, tumors, contractions of the vaginal and uterine canals, cicatrices or other causes; for these belong rather to the domain of gynecological surgery, and would require more time for discussion than could be given to the subject in this essay.

Dysmenorrhea has been variously classified by different authorities.

Churchill divides it into inflammatory, neuralgic and that dependent on mechanical impediment; Thomas into neuralgic, congestive or inflammatory, obstructive, membranous and ovarian; others into neuralgic, spasmodic and obstructive, while some would add rheumatic. Dr. Fenner, of New Orleans, and others regarded the pains of menstruation in many cases as of a rheumatic character.

These various divisions would indicate quite a variety in the pathological views held as to the causes of this disease.

For all practical purposes I believe a division into neuralgic, spasmodic and obstructive is sufficiently discriminative pathologically, and with reference to proper treatment; and probably nineteen-twentieths of the cases met with in our practice in the country can be successfully treated as either neuralgic or spasmodic.

The diagnosis in this disease is plain, and cannot well be mistaken for any other; therefore, I shall enter upon no minute description or detail of the symptoms of dysmenor-

rhea. Suffice it to say that menstruation attended with pain, usually about the loins, the umbilical and pubic regions, commencing a day or two before or during the flow, is dysmenorrhea. In a large majority of cases the flow at first is scant, sometimes intermittent, and attended with the discharge of clots of coagulated blood; but as it becomes more free, the pain gradually subsides, and the woman is relieved until the next menstrual period. This is about the usual course in a simple, uncomplicated case of dysmenorrhea; but, of course, the symptoms vary in different cases.

Among the most distressing symptoms in some of these cases coming within my observation are nausea, vomiting and fainting. A patient of my own with dysmenorrhea suffered extremely with those symptoms, followed with hysterical convulsions at almost every menstrual period. The intensity of the pain seemed to be the exciting cause, both of the nausea and convulsions.

Another peculiar condition of the system that came under my notice was an extremely sensitive and irritable condition, not only of the vagina and over the uterine region, but extending to other parts of the body. The slightest touch or pressure, suddenly made, excited a paroxysm of nervous agitation and pain.

In the membranous form of dysmenorrhea the symptoms are very much the same as those already described, only the pain is sometimes more aggravated and the discharge of clots more common, frequently including shreds of membrane; or in other cases, after repeated expulsive efforts, a membranous sac, unbroken, is thrown off, resembling in form and appearance the lining membrane of the uterus. In this, as in other menstrual troubles, the mental faculties are frequently much disturbed, sometimes greatly depressed and carrying the patient to the verge of insanity.

The predisposing causes of dysmenorrhea are referable, I believe, in great part to the customs, habits and enervating influences of civilized life.

Women in all ages and among all nations, rude and civ-

ilized, have doubtless suffered with dysmenorrhea; but this, in common with other derangements of menstruation, is certainly more frequent in its occurrence from causes associated with the conditions mentioned; and it may be safely said, that the greater the departure from the plain, simple manners and mode of life of our ruder ancestors, the more common become all diseases growing out of a more highly developed, and consequently a more sensitive and excitable nervous system.

I believe it is a fact well established that women whose life of toil tends to develop and harden the muscular system, and especially the women of our Indian tribes, and those of a ruder life in other parts of the world, suffer less pain in parturition, and are less sensitive to pain from any cause, than women more highly favored with the advantages of an enlightened civilization.

I am inclined to believe that these menstrual troubles are more common among the women of our own country than elsewhere.

Delicacy of physical structure and inaptitude for bodily exertion and great fatigue are characteristic of American women, and I believe these conditions grow largely out of our system of education, in connection with fashion in female dress and a life of comparative ease and luxury.

Our educational system I believe to be greatly at fault, especially when we apply it alike to girls and boys; and while both will suffer from it, the heaviest burden will fall upon the girls. A child is scarcely out of the nursery before it is put into the school room, crowded and badly ventilated at that, and required to remain there from six to eight hours a day for eight to ten months in the year, and the same course repeated over again yearly during the larger part of the child's minority, in the meantime overcrowding and stimulating the brain with the most intricate studies and problems—developing brain and mental power at the expense of the physical frame and bodily vigor.

I wish I had the time and this were the occasion to en-

large upon this subject, for I think I have witnessed the evil effects upon many a poor woman who went prematurely to the grave, or who is now dragging out a miserable existence.

Fashion in dress is another source of these derangements, more particularly in the women of our own country, for nearly all of them conform to it, regardless of climate, season and local conditions. The unequal distribution of clothing over the body, the extremities and upper portion of the chest being very thinly clad, while the body is compressed and over-heated by a super-abundance of clothing mostly suspended from the waist, dragging down and crowding the organs within, preventing that full and vigorous development so essential to health, this is another source of trouble. This I know is an old threadbare subject, but from its importance in a sanitary view, it cannot be too frequently called to mind. But upon this question I believe we are growing wiser as we grow older.

It is probable that climatic influences in this country have much to do as predisposing causes of menstrual irregularities.

The long continued hot summers, followed, in some latitudes, by equally long cold winters, with the variations and sudden changes of temperature incident to them, are influences that may well have a deleterious effect upon those of delicate constitutions.

The exciting causes of dysmenorrhea are generally such as affect the nervous system, as sudden shock from fright, anger, great fatigue and exhaustion, and exposure to cold, coincident with the menstrual period.

Painful menstruation may occur to any woman under these circumstances, and such cases are very common, but generally they are of short duration, requiring but little treatment, and are soon relieved. But that form of menstrual disorder, known as habitual dysmenorrhea, worrying the woman for years, and, perhaps, for life, has a more permanent cause either local, as flexures of the uterus, tumors, etc., or that dependent on some more deep-seated

constitutional disturbance, or disease or deranged function in other organs of the body, ultimately transmitting its morbid influence to the reproductive system. I am of the opinion that a very large number of cases of habitual dysmenorrhea have their origin in an intentional exposure to cold by young women for the purpose checking the menstrual flow, with a view to convenience or to conceal it. The first appearance of the menses is a period of great alarm with many girls. They do not know the meaning of it, and too modest to let it be known, try to conceal it, or, if knowing it, and ignorant of the danger to health, try to suppress it; and for this purpose I have known them to resort to some stream of water and denuding themselves, apply the water freely to the body, or stand with the feet in it until the flow was checked, and then washing every vestige of stain from their underclothing.

For this I believe mothers and guardians are largely to blame, or it may be that the fault is in the mother's want of proper education on this subject; for unquestionably many of them let their daughters grow up in ignorance of a function that is so soon to usher them into perfect womanhood, and upon which so much of their future health and happiness depends.

With all women in health, at each menstrual period there is an increased flow of blood to the reproductive organs. The ovaries and uterus become congested, the nervous system more excitable and sensitive. Now, if the menstrual flow comes on in the usual quantity, and no accidental circumstance intervenes to check it, the congestion is gradually relieved, the excitability of the nervous system subsides, and the woman goes through that menstrual period with but little disturbance. But if from some depraved condition of the system, such as impoverishment or other morbid state of the blood, a highly excitable state of the nervous system exists in connection with an inherent or acquired weakness in the reproductive organs or some obstruction to the free escape of the menstrual flux, then

in that case she may have some one of the several forms of dysmenorrhea mentioned. If neuralgic, the uterine and ovarian pains frequently alternate with pains in other parts of the body, the menstrual flow in many cases being unobstructed and free enough. The pain is also more constant, the patient scarcely being free from pain in some part of the body during the continuance of the flow.

If, of the spasmodic form, the pain alternates with intervals of ease resembling very much the first pains of labor, and the flow is frequently interrupted or checked, to be resumed again after the discharge of one or more clots of blood. This form of the disease, according to my observation, occurs most frequently in the plethoric and those having the appearance of good health.

Some authors describe an inflammatory dysmenorrhea as occurring to the same woman monthly, but this variety of the disease must be very rare; or, if inflammatory at all, a coincidence. There is certainly, in many cases, a very irritable condition of the vagina and uterus, and over the ovarian region, so much so that an attempt to make a vaginal examination will produce intense pain. We frequently witness this same irritability of the parts in the beginning of labor, but this I regard as an hyperesthesia rather than an inflammation. It seems to me that an organ of the body subjected to the inflammatory process for four or five days in every month would become so disorganized that its natural function would be destroyed, yet the woman, in many cases, ultimately becomes fruitful. The reasonably good health of these women during the intermenstrual period, seems to me to be incompatible with an inflammatory condition so frequent in its recurrence.

That form of menstrual derangement known as membranous dysmenorrhea, I believe to be but a modification of one or the other varieties just described. It may have all of the characteristics of either the neuralgic or spasmodic, or both, modified only by the presence and discharge of a membranous formation entire, or in shreds.

I am of the opinion that this form of the disease is of much more frequent occurrence than is generally believed by the profession. The discharge of the membrane is not always necessarily attended with pain, and probably its presence is not always observed, consequently there may be many cases in which physicians are not consulted. Dr. Dewees claimed that he had cured more than a hundred cases of it; others have met with twenty-five or thirty cases, and probably most physicians who have been in practice for many years can call to mind one or more cases.

Nearly all of the older writers upon this form of dysmenorrhea, and some of the authorities of the present day, believe this membrane to be the lining or mucous membrane of the uterus, and its detachment the result of inflammation, or an endometritis. This is the view held by Braun, Tilt and others. Some authors believe it to be the product of an inflammation or some morbid condition of the ovaries.

Thomas, Emmet, Barnes and other good authorities do not believe it to be the result of inflammation, while Simpson "attributes it to an exaggeration of the normal condition."

In regard to the menstrual process, I am disposed to adopt the view hinted at by Müller, in his work on physiology, that "it is probable that menstruation is the result of a periodical regeneration, a kind of moulting of the female generative organs, attended, perhaps, with the formation of a new epithelium," or, as more recently suggested by the late Dr. Tyler Smith, that there is a "disintegration and throwing off from the uterus of a deciduous membrane at each menstrual period." Dr. Thomas Addis Emmet, in his work on the principles and practice of gynecology, says, "with our present knowledge the weight of evidence is in support of the view already given, that the whole lining membrane above the internal os is removed at each menstrual period."

This view is also held by Drs. John Williams, Aveling

and Farre, of England, besides others in this country and Europe.

This is a question not easy of solution, from the fact that opportunities do not frequently offer for investigation on this subject, either in health, disease or post mortem inquiry; and when they do it is under circumstances not favorable to correct or positive conclusions; therefore, while holding to the view that there is a monthly membranous formation, I feel justified, without further evidence, in doubting that the true lining membrane of the uterus is ever detached as a result of menstruation, dysmenorrheal or otherwise, leaving nothing but the bare muscular wall instead. This seems to be out of harmony with usual physiological operations in other parts of the body, for the mucous membrane lining the other cavities of the body is as permanently fixed and as orderly in its function as any other tissue, and is known to be always present in the uterus before menstrual life begins and after its cessation. That it is greatly thickened and disturbed in its relation to structures beneath, and that there is an enlargement and a projecting through the membrane of the utricular glands during the process of menstruation, I think, has been sufficiently attested by competent observers, but that the membrane is detached and discharged at this time lacks confirmation.

Being a question then, unsettled by our authorities, and still left to conjecture, I feel free to venture the opinion that this membranous formation is a monthly secretion by the uterine glands, and deposited on the living membrane for a special purpose. Ovulation is not an irregular process, nor an accident. Nature does not accomplish her purposes by accidents, possibilities or mere probabilities, but by a regular succession of events governed by a system of perfect law. Therefore, ovulation, after puberty, is a regular periodical process accomplished in the ovary in about twenty-eight days, when the ovisac ruptures and the ovum is conveyed into the Fallopian tubes in its passage to the

uterus. Now, while this process is going on in the ovary, the uterus is certainly not passive, but no doubt making the necessary preparations to receive the ovum, and a part, at least, of this preparation is the formation of this deciduous membrane. But fecundation failing, this membrane is disintegrated and carried off by the menstrual flood, literally dissolved and washed away, to be renewed monthly in every healthy menstruating woman.

Why this membranous layer is not detached and thrown off at all times, thus preventing the reproductive process altogether, is not known, but my speculation in regard to this is, that during ovulation, or at the time of the passage of the ovum to the uterus, there is congestion and a condition of excitability of all of the reproductive organs, probably a state of electrical excitement. Now, at this time, if the ovum is fecundated, the demands of the generative function being satisfied, there is, indeed, a state of electrical equilibrium, a state of rest; the nervous erethism of the organs subsides, and the congestion is relieved by the excess of blood being returned to the general circulation. But, on the other hand, the vivifying principle being absent, the congestion and excitability are relieved by a flow of blood from the uterus, at the same time disintegrating and carrying off this deciduous formation.

If these views are correct, then it follows that the morbid process in membranous dysmenorrhea is not so much in the formation of the membrane, as the absence of some secretion or exhalation from the lining membrane of the uterus mingling with the blood, depriving it of its disintegrating quality. Or it may be that the morbid condition is in the membrane becoming too highly organized or in advance of the demands of the reproductive function, or, as Simpson expresses it, an "exaggeration of a normal condition," therefore disintegrated with the greatest difficulty.

Mechanical or obstructive dysmenorrhea is regarded by some of our highest authorities as the most frequent form of the disease.

Dr. Barnes believes there is one essential cause common to all, or a large majority of cases of painful menstruation, and that is, constriction or narrowing at some one of the openings into the uterus, but most frequently at the internal or external os. Spencer Wells and others hold the same views.

That there is constriction in many cases, is no doubt true, but there are so many exceptions to it, in my opinion, as to invalidate it, as a rule.

In a discussion on the subject of dysmenorrhea in the Obstetrical Society of London, Dr. Playfair, while admitting the mechanical theory in many cases, said "that there are a far larger number of cases than Dr. Barnes allowed where nothing of the kind could be found," and with Playfair agreed also Beck, Tilt and others.

The advocates of the constriction theory cannot agree as to its location. Dr. Theophilus Parvin, in a notice of the work of Dr. Barnes on the medical and surgical diseases of woman, says, Dr. Barnes finds the constriction at the external os in the largest number of cases, while Dr. Greenhalgh, who has operated on three or four hundred cases, finds the constriction at the internal os in a majority of cases. On the other hand, Dr. Rush has passed the sound in between three and four thousand cases and never found constriction at the internal os.

It is a very remarkable circumstance that women with constriction at the external os find their way to the wards of Dr. Barnes, while those with constriction at the internal os find their way to Dr. Greenhalgh.

These are high authorities in medicine, and their investigations and opinions are worthy of our attention and study, but their conflicting views and contradictory statements on this subject are sufficient to show that we cannot place much confidence in their theories, but we are to use them rather as aids in investigating this question for ourselves.

In regard to mechanical constriction, Emmet says that he has "observed several instances where the mucous mem-

brane had become so contracted over the mouth of the canal, from the use of lunar caustic, that the orifice was too small to admit the finest probe, yet in these cases" he "has seen the menstrual blood escape drop by drop from the small opening, but no pain was experienced except when the blood accumulated very rapidly."

The inference is a reasonable one, that in these cases of Emmet's, the menstrual blood was normal, both in quality and quantity, and consequently passed the stricture without pain. The same is no doubt true in many cases of flexure of the uterus, for it is well known that in some such cases the menstrual blood will flow without pain, when the flexure is to the extent of producing sterility. I believe it is safe to say, that of two women with flexure of the uterus of the same kind and to the same degree, and both to the extent of producing sterility, the one may menstruate without pain and the other suffer agony at each menstrual period.

These facts afford evidence, to my mind, that there must be, in many cases, some other element than that of constriction to cause pain in menstruation I am of the opinion that dysmenorrhea is caused, in a large majority of instances, by the presence of clots of blood in the uterus. A clot in the uterus no larger than the tip of the little finger, with no other than the natural contraction of the neck, will nearly always produce pain in its expulsion during the menstrual flux. It becomes at the time a foreign body in the uterus, acting as an irritant and at the same time exciting expulsive effort and increasing the contraction of the os. We have all witnessed most severe pain and expulsive efforts, caused by the presence of small clots of blood in the uterus, a few minutes after the exit of a child weighing eight or ten pounds, and I believe a similar irritable condition of the uterus obtains in a large majority of cases of dysmenorrhea.

If such is the case, the morbid condition must be in the blood, which is most probably wanting in that element that prevents the coagulation of menstrual blood. I have thus

hastily and very imperfectly run over the more common forms of dysmenorrhea, leaving out of consideration, as stated in the beginning, all of those cases requiring surgical interference for their relief.

In regard to treatment, I shall be brief, only giving my own in these cases. Farther than this the books and periodicals of the day will give it much better than I can.

If called upon to prescribe for a patient in the midst of her suffering, if the menstrual flow has not begun, or is scant in quantity, I usually direct warm stimulating drinks, such as ginger, spice or clove tea, the warm foot or hip bath. If the extremities are cold, with chilly sensations over the body, the patient is to be put to bed with hot bricks or bottles of hot water to the feet and about the loins. If the bowels are constipated, give purgatives, usually calomel and rhubarb, or the compound cathartic pills. If the patient is plethoric, with flushed face and some excitement in the circulation, saline cathartics are preferable.

If the flow is still tardy or scant, assist the purgatives with copious injections of warm water. These failing to bring relief, I give compound spirits of ether, tincture hyosciamus, spirits of camphor, each half to one drachm, to be repeated, if necessary, until the flow becomes free enough. If the pain still continues, or is of a spasmodic character, the pulse rather weak, I find nothing better than ten to fifteen drops of aromatic spirits of ammonia, at the same time using as an injection into the rectum, chloral hydrate, grs. xx–xl, bromide potassium, grs. xl–lx, tincture belladonna, gtt. xx, water, ʒiij–iv, and to this I frequently add tincture assafetida, or 30 to 40 drops of tincture of opium instead of the belladonna, and this prescription I have scarcely ever known to fail to give relief and rest to the patient.

Sometimes I use the hypodermic injection of morphia, but I am not partial to this mode of medication. If the patient is anemic, and the pains of a neuralgic character, I have frequently found ten grains sulphate quinine, with one-

fourth to one-third grain morphine, repeated two or three times, if necessary, to give more prompt relief, and to be more permanent in its effects than any other remedies. Vaginal injections of warm water, sometimes with the addition of laudanum and belladonna, are soothing and grateful to the patient.

This outline of treatment, varied of course to meet particular symptoms and individual peculiarities, I regard as applicable to all the forms of dysmenorrhea during the period of the menstrual flow.

During the intermenstrual period the treatment is directed with reference to the general condition of the patient. If she is anemic or neuralgic, iron, with other tonics, is given, a favorite prescription, in the beginning, being the well known compound of blue mass, iron and quinine, with the view of equalizing the circulation, regulating the bowels and restoring secretions. Afterwards quinine, iron and strychnia or nux vomica, warm baths, with friction to the skin frequently, flannel next the skin, and plenty of exercise in the open air, and this last not the least in my estimation.

In the plethoric the blood is as much at fault as in the anemic, and for the purpose of reducing that fullness of habit, counteracting the tendency to local congestions and correcting the morbid condition of the blood, I know of no better treatment than an alterative course of mercury, followed by saline purgatives, with warm baths, frictions, open air exercise and plain diet. If the patient is of a rheumatic or gouty diathesis, I have found no remedy superior to that of Dr. Dewees fifty years ago or more, and that is colchicum and guaiacum.

The prescription of Dr. Fenner, of New Orleans, in nearly all dysmenorrheal cases, and one that I have frequently used myself with good results, is gum guaiacum ʒjv, Canada balsam ʒiv, oil sassafras ʒi, hydrarg. chlorid. cor., gr. x, rectified spirit ℥iv. Of this is to be given ten or thirty drops night and morning, commencing a day or two before the flow is freely established.

After a sufficient trial of the usual therapeutic means, and before this, if I have reason to suspect local trouble, a vaginal examination is made to ascertain the condition of the parts involved, and the nature of the obstruction, if any, and I then direct the treatment that may be indicated.

In making vaginal examinations we will have a clearer conception of the nature of the case if they are made both during the menstrual and intermenstrual periods. Frequently, on examination we will find an exceedingly irritable condition of the vagina and os uteri, and for this I have found vaginal injections of a solution of sulphate of zinc, five to eight grains to a pint or more of water to be a very valuable remedy. The solution should be brought freely in contact with the vaginal walls and the os uteri, and repeated once or twice a week during the intermenstrual period.

In regard to constriction of the os, unless from cicatrice or malformation, I believe many such cases will yield to well directed treatment, other than that of surgical interference. If more serious trouble should be found, such as a flexed uterus or a permanent constriction of the os or cervical canal, the treatment adapted to the case should be advised, and for these the use of properly adjusted pessaries, incisions, the introduction of sounds, tents, and, probably, the rapid dilatation of the os, as practiced by Dr. Ellwood Wilson, of Philadephia, may become necessary, but these operations should not be undertaken without due deliberation and a clear understanding of the nature of the obstructions to be removed. Too much haste, probably, has been quite as detrimental to the patient as delay and too much caution.

In reference to other more formidable surgical operations for the relief of dysmenorrhea, such as spaying, amputation of the cervix, etc., I do not believe the results, so far as reported, justify the means.

Gynecological surgery, the pride and glory of the profession in this age, has accomplished grander results in the

last thirty or forty years than any other department of medicine; and all honor and praise are due such men as Sims, Peaslee, Emmet, Simon, Wells and others; but their brilliant successes have created a fashionable current in this department, in which too many, I fear, are ambitious of distinction, vieing with each other in performing the greater number of, and in inventing some newer and bolder operations.

Unfortunately we are not all Simses, nor Simons, nor Peaslees. If all of the failures and evil results following these operations were as familiar to us as the successes, I have no doubt a very dark shadow would be cast over the otherwise bright field of this department of medical science. On this subject I will close with an extract from Emmet, himself eminent in gynecological investigation.

He says: "Under the guise of surgery the uterus has been subjected to a degree of mal-practice which would not be tolerated in any other portion of the body. Its cavity has been, and is to this day, made the receptacle for agents so destructive that it seems difficult to understand how their evil effects have escaped observation. But," he continues, "I trust we have already passed the heroic age, and that, in the treatment of certain diseases, we may be hereafter governed by the same rational method as should apply in every branch of medicine, and that is, exercise our common sense."

CEREBRO-SPINAL MENINGITIS.

A Clinical Lecture. By J. P. KINGSLEY, *Professor of Diseases of Children, Missouri Medical College.*

THE patient before you, gentlemen, a boy twelve years of age, is suffering with cerebro-spinal meningitis, a disease, which, at the present time, is prevailing in the city of St. Louis as an epidemic, about twenty-five per cent. of the deaths which have occurred during the past four weeks having been due to this disease.

I will state briefly that it is an acute, epidemic disease, and is not unfrequently seen in a sporadic form. The symptoms which manifest themselves are due, as its name implies, to an inflammation of the membranes of the brain and spinal cord. The assigned causes are so numerous that we are left in doubt regarding any of them. It has recently been observed that it appears simultaneously in places widely separated, and whose soil, climate, and hygienic conditions are every way unlike.

As a general rule, its greatest prevalence is during winter and spring, and while it usually selects for its victims the young, no sex or age is entirely exempt.

We usually find that in simple epidemic cerebro-spinal meningitis, the disease is ushered in with a chill, more or less severe, previous to which the patient may or may not have complained for a few hours or a few days of slight chilliness or feverishness or a feeling of general discomfort, loss or partial loss of appetite and indifference to exertion. The chill is accompanied by severe headache and vomiting, the vomiting being due to cerebral irritation. Either of these symptoms may precede the other. If the attack is severe, the patient will utter frequent cries provoked by the intense cephalalgia. Muttering delirium may soon set in with great restlessness, or a state of stupor may ensue. Within a day or two, or at about the time we observe the mental disturbance, certain groups of muscles become contracted. Usually the muscles most affected are the posterior cervical and those that support the spine. This boy's head is drawn back by the tonic contraction of the posterior cervical muscles; there is also some curvature of the spine from contraction of the spinal muscles. This is one of the most common and characteristic signs of the disease. It is not, however, invariable. I am at the present time treating two little patients who have no retraction of the head or spinal curvature, but who, like this boy, complain of severe pain in the head, at the back of the neck and along the spine. I will call your attention to another symptom which

may manifest itself. You observe that this boy has strabismus, there being tonic contraction of certain muscles of the eye. You will also observe another very common symptom, dilatation of the pupils. This is nearly always observed as soon as effusion has taken place. The pupils, furthermore, are not equally dilated. We also find that light is painful to the eyes, for he turns his head from the light or closes his eyes when exposed to it. A more serious symptom, however, is blindness of one eye. If we attempt to hand him an object while holding our hand over the sound eye, he does not know in what direction to reach. The inflammation has extended to the optic nerve and induced this condition. The pupil of the blind eye you will observe is not half so large as the other. In fact, it is about the normal size, while the other is considerably dilated. As the inflammation subsides, and the lymph is absorbed, the strabismus may disappear and the sight be restored. Keratitis with opacity or ulceration of the cornea are not infrequent. On the other hand, either or both conditions may remain permanently. You observe the contracted brow which Marshall Hall alludes to as evidencing pain in the head, of which this boy complains constantly. The general expression of his face would indicate that he is cross, fretful and peevish, which is true and is quite characteristic of the disease. The face may be distorted by spasms, or may reflect the mental torpidity which frequently follows the severe onset of the disease. Hypersensitiveness of the cutaneous surface is quite frequently present. You observe that a slight pinch on almost any portion of the body induces him to cry out. Even moderate pressure with the finger gives him pain.

Regarding the temperature of the body, I will state that it is always elevated, notwithstanding the coolness of the surface of the body. The axillary surface, I will admit, is very frequently normal, in fact, less than normal at times, but if the temperature is taken per rectum, some elevation will always be found. The temperature of the surface often varies from hour to hour, and is usually higher in children

than adults. The temperature ranges from 100° to 105°. Respiration is accelerated. This boy's respiration is about 30 per minute. The pulse is usually accelerated, ranging in children from 100 to 140 per minute. I am attending two cases, however, that Dr. Justin Steer has visited with me, whose pulse has never been over 90 per minute, one of whom has been delirious. I have seen a case with Mr. Ameiss, whose pulse was 56 and temperature 101° on the third day.

The bowels may be either loose or constipated . Cathartics nearly always operate readily. The patient before us has involuntary discharges of both feces and urine, which is quite common. We evacuated the contents of the bladder twice a day in the patients just mentioned above, by the use of a soft gum catheter, there being paralysis of the bladder. In order to empty the bladder entirely, it was necessary to press with the hand over the supra pubic region. In three of the female patients I have attended, my attention was called to a quite free discharge from the vagina, not unlike a leucorrheal discharge. I first observed it in an adult female on introducing the catheter. I thought nothing of it until I ascertained it was present in three others, two of whom were only three years old. The discharge was white or whitish, and free from offensive odor, such a discharge as not unfrequently follows scarlet-fever and other debilitating diseases in little girls. It may have been a coincidence, as I am not aware of such a discharge being usual in this disease. It was so copious that I directed vaginal washes for its removal.

The mortality seems to have varied in the different epidemics from 80 to 20 per cent. The proportion of recoveries in recent years is undoubtedly much greater than formerly. If our patients do not die, there may remain as sequelæ, some permanent impairment of the brain or cord. The little girl five years old, who has been before you so frequently with partial paralysis of one arm and one leg, had cerebro-spinal meningitis when she was but four months old. There was great atrophy of the affected limbs. There has been

great improvement under the use of galvanism applied to the affected parts. You remember that we could dislocate the shoulder at will. In fact the humerus hung out of the glenoid cavity so much that we could shorten the arm three-fourths of an inch by pushing it into its place. I have under my care a child, whom Dr. Papin saw with me, three years of age, ill four weeks, and which had lately promised recovery. Yesterday, however, I observed a slight bulging of the eyes which warned me of approaching chronic hydrocephalus which is among the most frequent of the cerebral sequelæ.

Here you see gentlemen, a boy seven years old, who was attacked with the disease at about the same time as the little girl just alluded to. This case was apparently one of the most severe that I have been called to see during the present epidemic. For ten days he was wildly delirious except when under the influence of opiates. On one occasion the parents ceased to administer medicine for one day, stating that, as recovery was impossible in so severe a case, the administration of remedies was useless. The attack was sudden, the vomiting frequent for twelve hours, the cephalalgia intense, the opisthotonos and spinal curvature great, the delirium wild, the pupils considerably dilated. He had involuntary discharges of feces and urine for ten days. Now he stands before you apparently as well as any boy in the city. I am unable to discover any sequelæ whatever resulting from the disease in this case.

I cannot give you a better idea of the course, symptoms and morbid appearances which present themselves in this formidable disease than by referring to the notes which I kept of one of my cases:

Case.—April 1st.—William A. Allen, fourteen years of age, light frame, thin flesh, light hair, grey eyes, evidently not of strong constitution. On being called to this patient I was informed by his friends that the disease was ushered in by a chill, previous to which he drank half a dozen bottles of "pop" or bottled soda; eat heartily during the day;

had complained a little for two or three days preceding the attack; had been unwell during the greater part of the winter, having had measles, from which he did not readily recover; had been delirious ever since the chill came on, which was five or six hours before I saw him. On examining this patient I found the pulse rapid (140) and intermittent; axillary temperature 103°; face highly flushed; head hot and thrown back, due to contraction of posterior cervical muscles, producing opisthotonos; pupils dilated; delirious except when aroused; complained of pain in head, back and throat; talking to imaginary friends, calling out in peevish tones; grasping at imaginary objects in the air. He jumped out of bed frequently and walked across the room with a wild, vacant stare; lower limbs and feet twitched almost constantly. Ordered three C. C. pills at once, ten grains of bromide of potassium every three hours, cold applications to head and warm applications to feet.

April 2d.—Pulse regular and less rapid; did not sleep last night; expectorated freely and forcibly in any direction toward which his face was turned; involuntary discharges of feces and urine; deglutition difficult; unable to swallow solids; nurse kept him in bed with difficulty. Continued bromide and cold applications, and gave one-eighth of a grain of morphia at bedtime to induce sleep.

April 4th.—Condition unchanged. Sleeps when morphia is given. Continued treatment.

April 5th.—Complained of pain in lower limbs, particularly in right knee; pulse 130; temperature 102°; respirations 30; continued to get out of bed, but was unable to stand; weak; involuntary discharges of feces and urine; became more quiet; continued to ejaculate. Applied chloroform liniment to leg, and directed thirty drops of tincture of ergot every three hours; beef tea; chloroform by inhalation.

April 6th.—Pulse feeble; spoke only in a hoarse whisper; head thrown back at right angle with body; tongue brownish and dry; slept, after chloroform was administered, for

an hour or two—administered it two or three times a day; muscles relaxed under chloroform so that head could be carried forward on a line with body, but respiration was invariably arrested by so doing; continued ejaculating except when asleep. Beef tea and wine every two hours.

April 7th.—No change. Continued chloroform inhalations, ergot, cold applications to the head, and nourishing diet in a fluid form, egg nog, etc.

April 8th.—Ceased to ejaculate; head much more nearly on a line with body; raised up in bed frequently; answered rationally when spoken to; much more rational than usual; deglutition not as difficult as formerly; respiration hurried; pulse 130 per minute; no pain. Continued treatment.

April 9th.—Rested much better than usual; posterior cervical muscles much more relaxed, so that head was nearly on a line with body; involuntary discharges ceased; he called for urinal twice and passed water; friends hopeful—expected a recovery; restless; more rational than usual; tongue dry and heavily coated with a yellowish brown coat; deglutition still difficult; gnashed his teeth constantly: no pain; pulse 160 per minute; temperature 103°.

April 10th.—Pulse 170; temperature 102°; pupils contracted; rested until midnight better than usual, then became restless, and continued so until 3 A. M., when he again became quiet, and remained so until 5 A. M., at which hour he died.

Autopsy was made seven hours after death. Vessels of scalp quite empty; vessels of dura mater highly injected; a small amount of pus deposited on cerebrum, and a large amount on medulla oblongata and pons Varolii, perhaps two ounces; grey and white substance of brain softened and congested; right and left lateral ventricles each contained half an ounce of sero-purulent matter; choroid plexus injected; medulla oblongata, pons Varolii, and as far forward as the pituitary body, covered with lymph and pus. On opening the spinal column, found the dura mater highly

injected; arachnoid injected and containing considerable sero-purulent matter; pia mater highly injected and covered with a large amount of lymph and pus from the seventh cervical vertebra to the lower end of the cord. Cervical portion of cord quite free from lymph and pus, notwithstanding the meninges were highly injected. The largest amount of pus was found in the lumbar region. Heart slightly flabby; valves normal; fibrinous clots in right and left ventricles. Lungs slightly congested and a little softened. Liver congested; gall bladder full. Mucous membrane of stomach injected, dark and somewhat softened. Kidneys congested.

In regard to the treatment, I will say that we should attempt to relieve the congestion and inflammation of the cerebro-spinal axis by the most prompt measures we can judiciously command. Bladders or bags partly filled with ice and bran should be kept to the head during the first few days or week. Bran with the pounded ice makes the ice bag more uniform and comfortable and less intensely cold. If bran is not used, a piece of flannel should be placed between the ice bag and the scalp. Heat should be applied to the feet in the form of hot mustard baths, or hot irons, or bricks, or bottles filled with hot water wrapped in cloths. We thus relieve the hyperemic brain and cord. General blood-letting is no longer resorted to. Certainly, it is not advisable to resort to it in children. It must not be forgotten that the disease is asthenic in its nature, and sustaining treatment will be required.

The internal remedy in the early stages of the disease should be potassium bromide. This agent almost always produces a beneficial effect in the diseases of children where the nervous system is involved. It diminishes the amount of blood in the brain by lessening the caliber of the arterioles. Ergot will accomplish the same end, but the bromide is a better agent to use in children, in consequence of the double effect produced. A child five years old may take five grains every three, four or five hours,

depending upon the severity of the attack and condition of the patient. The bromide should not be continued in large doses after the end of the first week, and should not be administered at all, as a rule, after the end of the second week, lest bromism be produced, the symptoms of which are very like cerebro-spinal meningitis.

Opiates are indicated to relieve pain, and give much better results than chloral hydrate. When opiates fail to induce sleep, chloral may be combined with them, but it must be borne in mind that less of both agents are required when used in combination. A twenty-fourth part of a grain of morphia will frequently relieve pain and cause quiet sleep in a child five years of age. Niemeyer, Ziemssen and Bartholow consider opiates among the most valuable internal remedies that we possess. I cannot say much in favor of quinine except as a supporting agent. I have given from five to thirty grains a day with no apparent benefit.

Sustaining measures should be resorted to almost from the beginning. Soups, meat broths, milk, and after a short time egg nog and milk punch.

After effusion has taken place, potassium iodide, with tonics, should be administered to promote absorption of the lymph. About five grains three times a day to a child five or six years of age, in combination with the elixir of calisaya or some other simple tonic. It is best to administer it about a half hour after eating.

I have said nothing about shaving and blistering the head, because it has been almost entirely abandoned.

Should constipation exist, an occasional enema will usually be quite sufficient to relieve it.

CATARRHAL CONJUNCTIVITIS.

BY C. E. MICHEL, M. D., *Professor of Ophthalmology, Missouri Medical College, St. Louis.*

Read before the St. Louis Medico-Chirurgical Society, April 15, 1881.

IN view of the great frequency of attacks of catarrhal conjunctivitis which have for the past two months been observed in this locality, and I believe also very generally elsewhere in the States, I have thought that the fruits of my observations during that period might perhaps prove not wholly without interest to those of you less specially engaged.

During the month of February last I first began to note an increase in the number of cases of the disease in question, greater than in former years. My attention was also arrested by the frequent coincidence of attacks of the same affection in several members of a given household. At this season of the year we naturally look for an increase of all forms of catarrhal inflammation; an enrheumed audience hopelessly wrecking an interesting play, or an entire congregation coughing down an eloquent discourse, is no uncommon occurrence in early spring, yet we do not, at such times, see a proportional increase of conjunctivitis. Indeed, I have often wondered at the marked comparative immunity then enjoyed by the conjunctiva. Hence this largely increased percentage of the ophthalmic variety of catarrh, instinctively leads us to seek some more tangible explanation than that afforded by the admittedly very inclement weather which has prevailed. Apace with the moderating of the temperature and the fairly pleasant atmospheric condition of the past two weeks, I have seen an increase in the number of cases and the violence of the attacks, which would not accord with the weather expla-

ration. The fact is, we are justified in regarding this year's conjunctivitis as epidemic, and must attribute its prevalence to the presence of a germ, perhaps made more and more active by the vivifying influence of the advancing spring. The facts observed have no other explanation.

Epidemics of conjunctivitis have often occurred, and science is now called upon to accurately determine the nature of the germ which causes them. That we must attribute the almost universal catarrhs of the air passages during this spring *largely* to the same cause, I am firmly convinced.

Confirmatory evidence of the epidemic and zymotic nature of the conjunctival inflammation of the past two months is found in the following facts: Adults never before affected with conjunctival disease, although suffering yearly from repeated catarrhs, have this season been attacked in markedly large numbers. The appearance of a case in a family or household permitted the foretelling, with a reasonable degree of certainty, of others soon to follow, the probabilities of spread by inoculation having been guarded against; indeed, in many instances several individuals in the same house would be attacked simultaneously, excluding the idea of direct contagion. Certain neighborhoods, at times, would furnish quite a number of cases. As a rule both eyes were generally affected at the same time. I have, on several occasions, seen, in the same individual, after complete recovery of several weeks standing, a second attack come on, the last being generally of a milder form than the first.

Apart from the foregoing peculiarities, the disease has not differed from what is ordinarily observed, save in this, that I have seen a large number of cases with as violent initial symptoms as any gonorrheal ophthalmia, pure pus escaping in great quantities for a few days, then rapidly getting well in an astonishingly short time without the intervention of any remedies which could properly be called curative. Children between the first and tenth years seem

to have been more obnoxious to the disease than older individuals in the proportion of about three to one. The average duration of attacks treated on the expectant plan was about three days; few, if any, have lasted over ten. In the majority of instances twelve to twenty-four hours was the limit, most of them really requiring no treatment.

When astringent collyria had been used previous to my seeing a case, it invariably proved more obstinate and of much longer duration. In not a single case, occurring in a previously healthy eye, have I seen any complication whatever, nor have they had any tendency to become chronic. What part the medication, or, more properly speaking, the absence of medication, played in the bringing about of these results, each may judge for himself. Certainly one fact was established beyond question, namely, that astringent collyria or antiphlogistics were not needed, even in the severest cases. This is important, for patients were spared pain and, I believe, prolonged treatment and, perhaps, complications. I am in my own mind convinced that it is more particularly to that which I *did not do* rather than to what I did that so uniformly rapid and satisfactory results were due. My views of the appropriate management of conjunctivitis have already been given in the ST. LOUIS COURIER OF MEDICINE of September, 1879. They were based on physiological and pathological principles, backed by the experience of many years. To-day, with the experience of two more years to assist me, I can truly say that, since adopting the treatment referred to, not a single valid objection has been made to it, nor has any unfavorable result, attributable to the course pursued, taken place to shake my faith in its eminent appropriateness. The treatment is based on the assumption of the self-limiting nature of catarrhal or purulent ophthalmia when uncomplicated, thus placing the inflammation in the same category as acute catarrhs of the similar, contiguous and continuous mucous tract of the air passages. An eminent physician of the past, when asked the best treatment for a cold, an-

swered, "two weeks and a novel;" and to-day the well-informed medical man does not interfere with an uncomplicated case of catarrh of the air passages, or any recognized self-limiting disease, such as the exanthemata, etc. No absurd effort is made to cure that which will get well of itself by administering inoperative or possibly harmful, so-called specific remedies, the potencies of which he knows little; he now contents himself with a watchful care to avert all injurious agencies which might aggravate the disease, at the same time that he attempts to palliate any unusually prominent symptom by well tried and harmless means or remedies. So in conjunctivitis, I place the patient and parts in the most favorable hygienic condition, abstain from irrational tamperings, such as irritating collyria, and stand by, ready to assist nature in an emergency with measures of no doubtful efficacy; for here, even more stringently than in other instances, our first duty in the treatment of so important and exquisitely delicate an organ is to be reasonably sure that, in our natural anxiety to be doing something to relieve the sometimes alarming affection, we do no harm by making use of questionable means or remedies.

To strictly follow out this expectant treatment in face of a case of violent catarrhal or purulent ophthalmia, with its raging fury which seemingly must inevitably destroy the eye or eyes, I admit, requires nerve and implicit confidence in the rationale of the treatment. Certainly a far less onerous sense of responsibility rests on the average physician who, with a moderately certain knowledge of coming events, sees his patient out to the *end* "secundum artem," than upon the one who, equally convinced of the worthlessness of the teachings of authorities, frays out for himself a new course with nothing but his own convictions to sustain him; so in this instance, one would generally sleep better, and hold himself blameless, if blindness resulted after the typical cauterizations with nitrate of silver, the use of astringents without stint, scarifying the conjunctiva and

occasionally leeching, or torturing his victim with blisters, etc., while at the same time the luckless eyeballs are half frozen, and the patient is fortunate if he escape with only a cold in the head. The learned physician of to-day, more than doubtful of his inability to cure, is satisfied with calmly watching the known course of disease ordinarily self-limiting in its nature; he protects his patients from injurious influences, and at most attempts to modify any unduly exaggerated symptom by the intervention of a well-known or simple remedial measure; not so with his less fortunate brother; he, armed with his favorite authority, "works" with his patient *manfully*, physics every hour with nauseating and dangerous remedies supposed to possess special curative properties; less than this seems ignorance to him. As science fills the many physiological, histological and pathological gaps which now exist, we may gradually be enabled to apply our remedies knowingly and even possibly control disease (*cure*); that time, unfortunately, has not yet arrived, certainly, as regards the vast majority of the ails to which we are subject. I, for one, am content to await the progressive steps which may instruct us how and when to apply our potent remedies with some degree of precision. The experimental method of applying remedies is unscientific, and I must admit, distasteful; too much like groping about in the dark amidst innumerable precipices in search of exceedingly scarce gems.

I will here only summarize my management of conjunctivitis, which, of course, is modified to suit mild or serious attacks. Some cases get well suddenly, and, so to speak, without treatment.

I always order rest for *both eyes* in every case; shade them moderately, only when photophobia is present, but exclude air and light as little as possible. No bandage whatever is allowed; they keep the parts irritated, foul and hot. Secretions which escape from the lids are removed as often as they reaccumulate, generally with a fluid made

bland by the addition of an emollient and common salt. Light, fresh air and exercise being important hygienic adjuvants, my patients are ordered to take exercise daily in the open air, even during wintry weather. I, myself, in the midst of a most violent attack of conjunctivitis, recently faced blustering March winds daily, (the thermometer being below 32° F.) with most grateful sensations and decidedly beneficial effects. The idea that exposure of an eye or other inflamed part to cold air is dangerous, while cold water compresses are considered beneficial, is absurd; dry cold is undoubtedly less irritating to the delicate structures involved, and a far better constringer to the tissues and capillaries, hence, I rather court than avoid it, only employing cold compresses at moderately long intervals. For this last purpose I have been in the habit of using an external application, a weak astringent solution containing opium; I do not regard it as important, but it is as convenient as water, and the opium and astringent probably help the cold in diminishing the caliber of the vessels, and thus assist in controlling the local blood supply. Some bland unctuous preparation, also containing opium, is applied to the margins of the eyelids; it serves to protect these delicate parts from the great irritation caused by the constant overflowing of tears and pus, and the consequent irritating application of the handkerchief or detergent, and, moreover, prevents the lashes from being glued together during sleep. Antiphlogistics beyond what may be found in the preceding, I never employ. I never use purgatives, scarcely deeming it necessary to relieve a habitual constipation of ordinary degree.

The diet of my patients is properly regulated, and any constitutional condition deviating from a perfectly healthful or physiological standard receives due attention, for I firmly believe that any self-limiting disease occurring in a previously healthy individual, if not interfered with by either wilful or accidental noxious influences, will invariably terminate favorably of itself; it follows that the more

nearly we are able to place the system at a healthful standard, the more we favor such terminations. General debility, dyspepsia, anemia, struma or scrofula, and malaria are the most frequent disturbances calling for interference. Quinine, iron, pepsin, and the preparation of malt, are the remedies most generally indicated. It is to this last judicious management of my cases, combined with the absolute absence of all irritants, in the shape of collyria etc., that I attribute the fact, that in previously healthy eyes, I see no proclivity towards that chronicity or relaxed condition to which authors so uniformly refer, and against which they all direct their formidable collyria and cauterizations. If no irritants be used and a moderately patient perseverence with proper tonics be relied upon, the relaxed condition spoken of will more surely, speedily, and thoroughly disappear, than by the use of any local application.

If we ever discover a remedy, which, when externally applied, is perfectly free from irritating properties, while it induces contraction of the walls of the smaller vessels and capillaries of a part, we will then probably be in possession of an agent which will find its application as a collyrium; it is in this direction only that we need seach, for all known astringents act as irritants, and probably only possess their peculiar power over the involuntary muscular fibres of the walls of the blood vessels through their peculiar irritating properties, which, to my mind, is a counter indication to their use, and must necessarily render them unsafe and absolutely unfit as local antiphlogistic remedies. At one time I had hoped for much from ergot, but either a defective method of applying the remedy, or some of its own peculiar properties have so far thwarted what would naturally have been expected of it. Further experience with this valuable remedy will, however, I trust, teach us a more efficacious mode of using it locally, and thus give us a valuable topical remedy of extensive possibilities.

CASES FROM PRACTICE.

STERILITY AND MEMBRANOUS DYSMENORRHEA, POSTERIOR SECTION, AND INTRAUTERINE INJECTION.

BY W. L. BARRETT.

Read before the St. Louis Obstetrical and Gynecological Society, March 12, 1881.

In April, 1880, Mrs. O'N, the wife of an army officer, consulted me on account of sterility and dysmenorrhea. Her age was 26, and her physical development excellent.

The period, which was normal in time and quantity, had, from its first appearance, been excessively painful. The character of the pain was spasmodic. It commenced with the flow, and continued as long as the flow lasted. Distressing nausea was always associated with the pain, and membranes were frequently expelled.

Formerly her health in the interval of menstruation was good; but since her marriage, two years ago, the spells of suffering had been intensified and lengthened. The general health was now perceptibly giving way. She was growing thin, losing appetite, and getting nervous and neuralgic.

Examination revealed a long conical cervix, an unusually, narrow external os, an acute anteflexion at the internal os and an increased depth of the uterine cavity. There was no other pathological condition present.

May 22nd, I performed posterior section of the neck, after Sims' method. The canal was kept well open by the introduction of an elastic flexible stem, and nothing noteworthy marked convalescence from the operation, which was prompt and satisfactory.

At the expiration of two weeks the first period after the operation came on in a perfectly normal manner. She seemed

entirely relieved of the pain and nausea that had hitherto made these epochs so miserable. Though the period had terminated so happily, she decided, by my advice, to remain in the hospital until after the next period had passed, to make assurance of recovery doubly sure, before returning to her marital and domestic duties.

The second period after the operation came on in due time, and for the first two days was devoid of discomfort, but on the the third day, the old uterine colic, accompanied by excessive nausea, came on with as great violence as before the operation.

The spasmodic contractions of the uterus were constant, and the nausea profound. Not a teaspoonful of water could be retained, and the rectum participated in the irritability of the stomach. Nutrition was thus entirely precluded and the traditional anti-emetics were as futile as they usually are.

The vomiting continued without intermission for nine days and nights. During that time she had not retained a morsel to eat, nor taken any fluid that was not immediately rejected by the stomach. Her face, naturally round and full, was now pinched and wan, and I began to be seriously apprehensive that she would die of exhaustion, as I was helpless to arrest the nausea, and I saw no prospects of its stopping. There was only slight acceleration of the pulse, the temperature was not elevated. There was tenderness on moderate pressure over the ovarian regions, and any touch of the uterus per vaginam excited excruciating pain. I regarded the nausea as reflex, and supposed it due to a circumscribed cellulitis, but physical examination caused so much pain that I did not make a thorough exploration.

On the morning of the ninth day, I heard the patient retching as I entered the front door, and knowing her prostrated condition and my helplessness to relieve her, approached the room reluctantly. I was thoroughly discouraged with the imperfection of our art.

The sister in charge, meeting me at the head of the steps, informed me that there was some offensive discharge from the uterus. I had not been able fully to reconcile the presence of inflammation with the symptoms presented by the patient; and when this information was imparted, I felt convinced the source of the irritation was in the uterine cavity, and that if I could get it out, the patient would be relieved. I asked Dr. H. H.

Mudd, who chanced to be visiting the hospital at the same time, to see the patient with me, and witness the result of my effort to relieve her.

I put her on the table, introduced a syringe to the fundus of the uterus, having previously ascertained by the passage of a large sound that the cervical canal was patulous, and washed out the uterine cavity with warm water. The first syringeful of water brought away a piece of menstrual decidua about the size of a pea; and while she was still on the table, she said, "Doctor, I am relieved." She never vomited but once afterwards, and on visiting her a few hours later, she was sitting up in bed, eating and drinking, and protested that she could neither eat nor drink enough, as she was never so hungry and thirsty in her life.

Here was a piece of menstrual decidua retained in the uterus for eleven days from the commencement of the catamenial flow, retained, though not adherent in spite of powerful uterine contractions, with an unusually patulous cervical canal, exciting local hyperesthesia that simulated inflammation, and causing intense nausea.

I am not aware that reflex nausea, so common under such circumstances, has been explained in this way, nor that this method of treatment has been suggested by any one.

It is the second case that has fallen under my observation, and that I have relieved in the same way, and with the same striking promptitude.

I submit as an aphorism in practice, that whenever uterine discharges are offensive, the cavity should be cleansed. Such discharge is conclusive evidence that there is something in the uterus that should come out.

An Observation of Interest.—"It is the children of the the rickety and of the rheumatic diatheses that suffer most severely from dyspepsia and 'weak stomach.' Tubercular children are far hardier in this respect, while the strumous occupy a median position."—"*What Every Mother Should Know*," p. 38.

EDITORIAL.

VOL. V. JUNE, 1881. No. 6.

THE PLAGUE IN MESOPOTAMIA.

An epidemic of the plague is spreading over Mesopotamia, having appeared in September last, and still continuing to extend its ravages. In one town of seven thousand inhabitants one hundred deaths occurred in three days. Like all other oriental cities and towns, those of this region are filthy beyond the possibility of conception by the mind of an American or European who has never visited the Orient; and there is an utter lack of appreciation or recognition of anything like hygiene or sanitary precautions.

The International Commission of Hygiene, whose headquarters are at Constantinople, have undertaken to arrest the spread of the disease by the institution of a rigid quarantine around the infected district. The Turkish authorities co-operate with them in this work, and have placed at the disposal of the commission both troops and medical officers.

One of the circumstances which has had more than any other one, perhaps, to do with the propagation of the plague has been the fanaticism of the Persians, which has led them to esteem it the greatest conceivable privilege to be interred in some sacred spot. The poor religious Persians deny themselves of even the necessities of life in order to save the means to provide for the removal and burial of their bodies at some of the sacred places in Mesopotamia. Some thirty thousand bodies are thus imported annually from Persia, by funeral caravans; and, at cer-

tain seasons of the year, the air is poisoned by these caravans along all the roads leading from Persia.

The commission has adopted very decisive measures, disinfecting most energetically, and destroying by fire the clothing, bedding and dwellings of those who have had the plague, and removing the inhabitants of the destroyed vilages to healthy locations, where the government supplies them with the necessities of life for the time being. All traffic with the infected districts is interdicted, and the transportation of dead bodies within the district under quarantine is strictly prohibited.

According to the *British Medical Journal* of April 9th, which gives full details with reference to the action of the commission, as reported in *les Temps,* western countries have little to fear from this epidemic, though if proposed railroads shall ever be constructed, such a condition of affairs as now exists might become a source of serious danger or disaster to the health of European countries.

INTOXICATING LIQUOR IN THE ARMY.

The subject of prohibiting the sale of intoxicating liquors at places of refreshment in garrisons, and of discontinuing the supply of spirit-rations to soldiers on the march, was brought up before a committee of the House of Commons. With reference to the advisability of entire prohibition of the sale of liquor where men in garrison can obtain it, there seems to have been a considerable difference of opinion, although it is generally admitted that a large part of the crime, as well as of the sickness, in the British army, is the effect of drinking. But

careful observation and experimentation have made it much more generally recognized, that the spirit-ration to men upon the march is an injury rather than a benefit. A leading article upon this subject, in the *British Medical Journal*, of April 2nd., ends thus: "Collating the experience of campaigns, and the result of direct experiment, we may arrive at the following conclusions:

1. Given before or during a march, or work of any description, they are nearly always calculated to do harm.

2. Spirits are not an absolute necessity in the field.

3. The only case in which exception need be made to the above rule is, when men are near the end of a long and fatiguing march, which it is necessary should be accomplished. Then the issue of a spirit-ration may probably supply the necessary stimulus for completing the work; but it must be on the condition, that no further work shall be demanded until after a sufficient period of repose.

4. The issue of a ration at night, when work is done, may be useful as a sedative, and in inducing calm and refreshing sleep.

5. Under any of those circumstances, the ration ought not to exceed two ounces and a half of spirits—equal to one ounce and a quarter of alcohol; and it ought to be given well diluted with water—hot, if possible.

Even in cases where its utility is, with limitations, admitted it is still a question whether extract of meat might not be better, as it certainly would be attended with less chance of evil result, should it not accomplish the immediate end contemplated. Admitting, however, that, in cases where rapid stimulus is required, alcohol is more useful than any of the proposed substitutes, there seems to be no valid ground for continuing its issue on campaigns as a regular ration. It would be better to carry it as an extra, and only issue it by the advice and with the concurrence of the medical officer."

BOOK REVIEWS AND NOTICES.

Aids to Diagnosis: Student's Aids Series. Part I. Semeiology, by J. Milner Fothergill, M. D. Part II. Physical, by J. C. Thorowgood, M. D. *G. P. Putnam's Sons:* New York, 1881.

Part I. Semeiology. The publishers of the Student's Aids Series have been happy in their selection of Dr. Fothergill as the writer of the subject, Semeiology. The charm of Dr. Fothergill's writings is well known, and the ability he possesses of treating well worn topics of medicine is given to few writers. In the study of diagnosis by the average student, the subject of semeiology or symptomatology is almost excluded by that of physical diagnosis. His knowledge of the subject, if he ever gets it, is obtained in later years, when bedside experience shall have taught him its great value. He then recognizes through sad experience that the physical part of diagnosis will not always suffice him, in distinguishing diseases. He recognizes the truth that for the true and accurate study of disease, both must be combined, and that an ignoring of either will bring him often into woeful error. The writer has in a few pages condensed the essential principles of a wide subject — the various points are taken up in a systematic order—the temperature, appearance of the tongue, pulse, cough, character of respiration, are discussed in a practical and pleasing manner. The book is small and cheap, and will certainly be of great assistance to every student who aspires to the study of diagnosis.

Part II. Physical Diagnosis, by Dr. Thorowgood, is good in some parts, but very poor in others. In his section on diseases of the larynx, the author shows a certain amount of theoretical knowledge, but his practical knowledge is certainly very limited. Certain of his statements are not only misleading, but incorrect. In the section on the chest, he is more at home, and a good deal of valuable knowledge is condensed in a small space.

Abdominal diseases are treated in a limited manner, but the principal points of diagnosis are mentioned.

Taking this little book as a whole, it will be found of value to the student or practitioner as a hand-book of reference. It is so small that it can be carried in the pocket, and may serve in an emergency to refresh the memory on doubtful points.

THE HEART AND ITS FUNCTIONS. *D. Appleton & Co.* New York, 1881.

This little volume is No. 8, in the series of Health Primers. Whether the popularization of medical subjects is a benefit is still to be proven. The task undertaken in this number has been well done. The anatomy, physiology and some of the disturbing influences producing disease of the heart are described in a popular manner, and it will doubtless please those not in the profession, ambitious of a certain knowledge of medicine. The student tired of heavy text-books, will find it light and profitable reading.

W. C. G.

HOW A PERSON THREATENED OR AFFLICTED WITH BRIGHT'S DISEASE OUGHT TO LIVE. By JOSEPH F. EDWARDS, M. D. *Presley Blakiston:* Philadelphia. 1881. 12mo., pp. 87.

This little book, being written for the patient's rather than the physician's reading, requires but short notice at our hands. Only the medical doctrines set forth and the views the profession is made to endorse are available for review here. The profession has a right to require that statements made in such "popular" books shall be accurate to a degree, and that debatable questions of pathology, etc., shall not be represented as if they were fixed, well-ascertained truths. The reason for this is evident: disregard of this right will soon result in having very diverse views and assertions before the minds of non-professional readers, to the great confusion of their minds (they being in the main, incapable of scientific criticism), and greatly to the detriment of scientific progress. This, too, is only one of the objections to books written for the purpose of "popularizing" medical knowledge.

Our author has divided his work into four parts, as follows;

1st. General Remarks.
2d. The Functions of the Kidneys and their Derangements.
3d. About Bright's Disease—What is it?
4th. Rules of Life.

Part first deals mainly with statistics intended to show that Bright's disease is more frequent in the present than in past times. The figures and remarks apply to Philadelphia, and are not conclusive: they leave it doubtful whether the greater number of reported cases, in later years, is not due to the greater care on the part of physicians in recognizing the disease.

In part second we find urea spoken of as a poison (p. 28), which it is not, in any sense of the word; and the idea is held out that uremic convulsions are due to its accumulation in the blood, a matter that, to say the least of it, is one of dispute by the best authorities, with the preponderance of evidence against the assumption. Certainly, uremic convulsions do not constitute a clinical feature in those cases where both ureters are suddenly blocked up by calculi—a condition where accumulation of urea in the blood is necessarily both sudden and rapid.

The opening sentence of part third (p. 31,) informs us that "Bright's disease, in all its forms, is essentially an inflammation of the kidneys;" and on the same page we have: "In some forms the kidney, at first enlarged, afterwards becomes contracted." The lay reader is here taught the theory of the unity of Bright's disease, though that view is now abandoned by the very best thinkers and investigators who have recorded their opinions. Again, on the same page, speaking of the contracting kidney, it is said that the "backward pressure on the current of blood being met and opposed by the onward pressure of the powerfully acting heart, the watery constituents of the blood are forced through the porous walls of the blood vessels, usually of the feet and legs, and so we have the dropsy produced, which is frequently present in the advanced stage of this form of the disease." If the high arterial pressure is responsible for the dropsy, how is it that the forms of Bright's disease, where this pressure is the highest, are just the ones where dropsy occurs with least frequency? High arterial pressure is certainly a feature of the granular contracting kidney, but dropsy certainly is not, at least until the latter stage is reached, when the flagging heart lowers it in a marked degree.

In pointing out some of the inaccuracies of statement contained in this little book, we are not forgetful of the fact that no more difficult task could be undertaken than that of

attempting to explain to the non-professional reader the nature of Bright's disease. There is hardly a point in the physiology and pathology of the kidneys that is not to-day a matter of dispute; and even our knowledge of the anatomy of the organ is not complete. What is here insisted on, is that opinions and reasons but half made up should not be put before the people as the accepted doctrines of the profession.

The main idea inculcated throughout the book, that a person threatened with or having Bright's disease should live in such a manner as to give the endangered or diseased kidneys the least possible amount of work to do, and the rules of life the author teaches, in part fourth, are worthy of the highest praise. There can be little question that the person with diseased kidneys, who follow these rules under the direction of an intelligent physician, will greatly prolong his life. Especially to be commended is the author's very clear and convincing explanation of the injury to be done by the use of diuretic medicines—the over-working of organs that are hardly able to work at all.

We hope to see a future edition, (we suppose there will be one, as these books are popular in these days), shorn of the objectionable features that are to be found in this one.

JOHN P. BRYSON.

TRANSACTIONS OF MEDICAL SOCIETIES.

AMERICAN MEDICAL ASSOCIATION. Vol. xxxi. 8vo., pp. 1153—131.

This portly volume contains a number of valuable papers, together with a number of others whose *casus essendi* it is somewhat difficult to determine. The sections on general medicine and on surgery are the fullest, and contain several papers of much interest, the best of which have already, in different medical journals, been more generally read than they will be in the volume of transactions. We had the pleasure of giving our readers Dr. Gadberry's interesting paper on "Artificial Inflation as a remedial agent in diseases of the lungs."

Diet in disease and diet treatment of disease were discussed in several papers, and the indications are that this important subject is beginning to attract the attention that it deserves.

The section on diseases of children, which was only a provisional arrangement at the New York meeting, was made a permanent section, and will be one in which valuable work will be done.

The volume closes as usual with the "code of ethics," and one hundred and thirty pages of a directory of the members of the association since its first organization.

ELEVENTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF VIRGINIA. 8vo., pp. 262.

The transactions of this society are published in the *Virginia Medical Monthly,* and thereby its papers are given a wider circulation than they would receive if published only in a volume by themselves. It seems to us that the way to give most value and interest to the proceedings of state associations is to publish simple abstracts of papers with the discussions thereon in the volumes of "proceedings," and allow the writer to publish the full papers where he pleases. The society might pass a vote of approval or not, as should seem best to them, and so authorize a writer to head his paper "Published with the approval of the ——— Medical Society," or simply "Read before the ——— Medical Society."

In the papers read before the Virginia Society we have noted Dr. Semple's Report on Advances in the Practice of Medicine, and Dr. Dabney's, on Cerebral Localization and Thermometry. The most interesting part of the volume is the "Discussion on Summer Complaints of Children."

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF KANSAS AT ITS FOURTEENTH ANNUAL SESSION, HELD IN LEAVENWORTH, KANSAS, MAY 11, 12 AND 13, 1880. 8vo., pp. 107, paper.

One noticeable feature of this little volume is the brevity of most of the papers that were presented. The papers which seem to have been most fruitful in developing discussion among the members of the society were that of Dr. Sieber, of Ellsworth, on Treatment of Syphilis by Hypodermic Sublimate Injections, and the Report on Diphtheria, by Dr. Ross, of Oskaloosa. We notice also a paper by Dr. J. M. Richmond, of St. Joseph, Mo., entitled "Stricture of the Urethra of Large Caliber."

Besides the minutes of the secretary, the papers and discussions, this volume contains the report of the Examining Board of the Kansas Medical Society, appointed the preceding year, including the names, school, date of graduation, number of certificate and address of graduates of medicine to whom the

board had issued certificates. We observe in this list fifty-eight graduates from St. Louis schools. The total number of graduates to whom certificates were issued was 663. There were also 148 names and addresses of those to whom certificates were issued after examination. A list is published also of the names of those rejected, numbering 158, also twenty-nine rejected by the Eclectic Board and six by the Homeopathic Board.

LOUISIANA STATE MEDICAL ASSOCIATION. 8vo., pp. 111, paper.

This pamphlet contains the papers read at the third annual meeting of this association. The organization is a recent one, and has many difficulties to contend with, but there is an evident determination to make the association truly represent the interests of the whole state, and not merely those of the chief city. We wish them all success in the endeavor. The association publishes a disclaimer of responsibility for the theories expressed in the papers published.

The paper which interested us most, in looking through the pages, was that of Dr. T. G. Richardson on Hydrophobia, including a tabular statement of fifty-three cases of this disease occurring in various parishes.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. NINTH, TENTH, ELEVENTH AND TWELFTH ANNUAL SESSIONS. 8vo., pp. 297.

The report of the first three sessions mentioned above gives only the secretary's minutes and reports of the officers, with the addresses of the retiring presidents. The proceedings of the twelfth session are given in fuller detail, and include a number of interesting papers.

The addresses of the retiring presidents are well considered and ably presented. All of them take a strong position as to the necessity of united effort on the part of the profession to elevate the standard of medical qualifications, and to secure legislation that will protect the profession and the people.

Among the papers we note that of Dr. A. S. v. Mansfelde on Surgical Treatment of Suppurative Pleuritis. Dr. Mercer has a long paper on Sayre's Treatment of Spinal Curvature. Dr. Abbot makes a report of all the operations for Strangulated Hernia made in the Territory and State of Kansas since its

organization as a territory in 1854. The number of operations was six, four of which were successful. The same gentleman reports a case of Operation for Laceration of the Perineum in a child under a month old. Dr. v. Mansfelde, in the section on anatomy and physiology, contributes two papers upon the Ovum and Sex Production, which are suggestive and interesting, whether or not we accept the author's theories.

VOLKMANN'S OPERATION FOR HYDROCELE.

Wm. Gardner reports three successful cases in which he performed this operation for radical cure. Operating under carbolic spray, he made an incision the whole length of the scrotum through all the tissues to the tunica vaginalis, which he then opened and divided to the same extent with probe-pointed scissors. The tunica vaginalis was then stitched to the skin by several points of interrupted suture, and after the insertion of a drainage tube at the lower angle, the whole was brought together with deep wire sutures. Antiseptic dressings were applied, and in a few days the wounds were healed.

He says that the advantages of the operation are: "1st. The absolute certainty of cure within a fortnight, if antiseptic precautions are observed. 2d. The smallness of the risk, as evidenced by Volkmann's list of seventy cases without a death. 3d. The simplicity of the operation. 4th. So far as at present known, the operation is never followed by orchitis, as has been the case with the injection treatment. 5th. This advantage has been pointed out by Mr. MacCormac in the following words: 'That a diagnosis in doubtful cases is thereby made easy, and a tumor of the testicle, of which the hydrocele is a symptom, may be thus examined, and perhaps, in some cases, treated by immediate removal, or in others by incision.'"—*Austral. Med. Journal*, January, 1881.

TRANSLATIONS.

AMMONIATED COPPER IN THE TREATMENT OF OBSTINATE NEURALGIAS.

TRANSLATED BY C. C. STOCKARD, M. D.

M. Féreol read at the meeting on January 23rd, 1881, of the *Société de Therapeutique,* the following on the treatment of facial neuralgia by ammoniated copper.

Since I called attention about eighteen months ago, to the good effects of ammoniated copper in obstinate neuralgia of the fifth pair of nerves, I have had frequent opportunities of testing this medication, and while, as was easily foreseen, it has often failed, still, it has given me some very satisfactory results.

Quite recently I have seen and treated at the clinic of Hospital Beaujon, a man seventy-one years old, who had been troubled with a supra- and sub-orbital neuralgia, the cause of which could not be determined, which had lasted more than a year, and had been treated by a number of remedies without any relief having been given. At the end of eight days the neuralgia had almost completely disappeared under the influence of ammoniated copper; and eight days later, the cure was complete.

It is now two months since the treatment, and there has been no return.

I do not wish at present, however, to give personal experiences; and will cite the observations which have been kindly sent me by some of my confreres. I cannot better thank them than by publishing their experiences.

I will cite in the first place from our excellent colleague, M. le docteur Moutard-Martin. He has tried the ammoniated copper in his service at the Hotel Dieu. I do not know how many trials he has made of it, but his interne, M. Robin, sent me under authority of his chief, two very interesting and successful observations.

One patient was a woman, twenty-nine years of age, neither

syphilitic nor hysteric, who had been treated in the city by a number of procedures. It was first attacked in the hospital with iodide of potassium, then by nitrate of aconitin, till vertigo and diarrhea were produced.

After two days of respite a relapse occurred. The ammoniated copper was then resorted to, and having been given twelve days, in the dose of ten centigrammes (1½ grains) per day, the recovery was complete.

A second woman, aged thirty-six years, suffering from neuralgia which affected principally the cervico-occipital, cervico-temporal and cervico-dorsal branches, was treated at first without success, with sulphate of quinine, veratrin and the iodide of potassium. Six days of treatment by ammoniated copper brought complete recovery.

One of my former internes, M. le docteur Colson, now residing in Paris, treated in 1879, at Bar-le-duc, a very vigorous man, aged fifty-seven years, neither syphilitic nor rheumatic, who had suffered for years from a sub-orbital neuralgia, which had resisted all sorts of medication.

To this patient, certainly one of the most unfavorable that could be encountered, the copper did not give complete relief, but a very decided amelioration. Instead of the painful twitchings which hindered his speaking and eating, and caused contortions of the face, there remains only a dull, but constant, pain; and the patient declared by letter that existence had become more tolerable to him.

My excellent confrere and friend, M. Raynaud, has told me of having obtained two splendid successes by this treatment, and he wishes to publish them himself. Still I will cite at least one of them, which struck me particularly. It was the case of an aged woman (more than eighty years,) who had been tormented for many years by a supra- and sub-orbitaln euralgia, complicating glaucoma. The neuralgia, treated by every means, had resisted all. Extirpation of the eye was judged necessary, and performed. The neuralgia persisted still. M. Raynaud then gave her ammoniated copper. On the day following, there was evident abatement, and fifteen days later, the recovery was complete. Since this time, now more than a year ago, M. Raynaud has followed the patient, and having seen her recently, is assured there has been no return. It is really difficult to imagine a clearer and more conclusive case than this.

Finally an American confrere, M. A. Machado, of Venezuela, had the delicate kindness to send me reports of two cases which I will relate briefly. The first case was that of a woman twenty-three years old. Her neuralgia affected the left auriculo-temporal branch, accompanied by roarings in the ear, with swelling of the auditory canal and a mucous secretion at the crises; no syphilis.

The disease had lasted several years, and had resisted a variety of treatments. After taking ammoniated copper fifteen days, at first ten centigrammes (1½ grains) and afterward five centigrammes (¾ grains per day, she was entirely relieved, and, remarkable to say, the mucous secretions and swelling of the external auditory canal disappeared with the neuralgia.

M. Machado's second case was a woman of forty, who had been afflicted nearly six months. At the crises there was active congestion of the face, contractions and a suppurating otitis. An intercurrent erysipelas did not modify the situation. Four days of treatment with ammoniated copper caused cessation of the neuralgia. There are then eight cases to be added to those already published, and among them there are three (the first of M. Maurice Raynaud and the first of M. Machado) which, by the long duration, the gravity of the disease, the rapidity and permanency of the recovery are very interesting.

Without doubt, as I said in the beginning, the result is not always so satisfactory, the failures are numerous, and I have found that the treatment may succeed once, and afterward fail, in the same patient, in case of relapse. Thus the ammoniated copper had succeeded perfectly in the case of a diabetic woman, sixty years old, afflicted with a right sub-orbital neuralgia. Having been perfectly free from it for several months, the neuralgia returned last autumn, and was treated, in the country, by a confrere, who employed successively the sulphate of quinine, arsenic and vesication. When she returned to Paris in November, there was a relapse after having had a slight amelioration, and I returned to the ammoniated copper, which had succeeded so well with her the year previous. It failed completely, and so did the nitrate of aconitin of Duquesnel. I then had recourse to static electricity, applied by M. Vigouroux, and this gave us a *quasi* recovery; the crises disappeared almost completely about fifteen days ago.

I have known the ammoniated copper to fail too, in the service of M. Raynaud, with a patient who was the first that I treated successfully with it in 1879, and who had a relapse after remaining well for a year.

It is certain then that the treatment is not perfectly reliable, and so far it has been impossible for me to determine in advance, whether in a certain case, it would succeed or not. Nevertheless, in face of the successful cases reported, now numbering more than fifteen, it should not be renounced; and we can say, with the author of the article on copper in the *Dictionnaire encyclopédique des sciences médicales*, M. Fonssagrives, that it is a resource not to be disdained in the treatment of such a terrible and tenacious affection as epileptiform neuralgia.

I have modified advantageously the mode of giving the preparation. The solution has the inconvenience of being of a disagreeable taste; to some absolutely repugnant. Its disagreeable taste adds to its nauseousness, causing even a sort of anesthesia of the sense of taste, which renders alimentation difficult, and everything the patient swallows seems to taste of copper. The tongue is covered with a thick, whitish coating. These are real inconveniences.

I have tried to remedy this by giving it in powder, mixed with the subnitrate of bismuth, and enclosed in Limousin's capsules. I formulate it thus.

Ammoniated copper, 2 centigrammes ($\frac{3}{10}$ grains.)
Subnitrate of bismuth 25 centigrammes (3 $\frac{3}{4}$ grains).
For one capsule.

Take five of these per day, two with each of the two principal meals, and one between the two meals, after which drink a small glass of milk. This can be increased to ten capsules per day, taking care always to take them while eating, or to take the milk afterward, to prevent the direct action of the medicine on the stomach. This mode of giving it has the advantage of causing less nausea and disgust, and of avoiding especially the furred condition of the tongue and persistent taste of copper. Generally the patient does not perceive that he has taken it.

Sometimes, however, it causes vomiting, and has to be stopped; but this is not ordinary. It is generally well tolerated, on condition it has been taken with the meals or with milk, and

I have continued it three weeks without inconvenience.—*Bulletins et Memoires de la Société de Therapeutique,* March 15, 1881.

OPERATIONS ON THE INTESTINE.

CLINIC OF PROF. BILLROTH. REPORTED BY DR. WITTELSHŒFER.

CASE I.—*Carcinoma of the Sigmoid Flexure.—Extirpation.—Formation of Artificial Anus.—Death.*—J. Fischer came into the hospital June 28, 1880. Has suffered from childhood from constipation and frequent passing of bloody mucus. During the past four months he has noticed the presence of hemorrhoids about the anus during defecation; he observed, also, in the left inguinal region a hard swelling, which sometimes changed its position, but was painless. For three months the constipation has been more obstinate, the feces being evacuated with great difficulty, and in narrow masses; there was at the same time a profuse, bloody mucous discharge per anum. Simultaneously there was painful urination and pains radiating from the anus through the perineum. Otherwise the patient suffered from no disease.

His condition at the time of clinical appearance was that of a badly nourished person. The thorax normal. In the left inguinal region a tumor about the size of a child's head, hard and but little movable; its position corresponded to the sigmoid flexure. By digital examination, the hand being introduced as far as possible through the anus, there could be felt a dense, circular, uneven constriction of the gut where it passed into the sigmoid region.

After preparatory treatment by clysters, etc., etc., July 1, operation. A curved incision was made over the tumor, beginning above the ant. sup. sp. ilii and ending near the middle of the pubes; this was done under antiseptic precautions. The tumor was found to involve the lower half of the sigmoid flexure. At one spot the mesentery and a loop of the small intestines were adherent. The tumor was freed from the surrounding parts and the spine; the gut was ligated below and cut off, being allowed to sink back into the pelvis; section above was

made, and the whole diseased mass extirpated. The upper end was sewed into the lower angle of the wound, constituting an artificial anus.

During the day there was occasional vomiting; toward evening he sank into a collapse, and died at 2 A. M.

At the post-mortem the first stage of a diffuse purulent peritonitis was apparent. This unfortunate result was anticipated when, during the operation, there was exposed a mass of infiltrated retro-peritoneal glands, which could not be removed, and which could not have been discovered before the operation.

Stricture caused by Carcinoma of the Sigmoid Flexure.—Artificial Anus.—Death after Three Months.—(Prof. Billroth's private practice).

Patient a man of fifty years, of small size, very much emaciated and weakened. The disease was of long standing, obstinate constipation, bloody mucous discharge from the anus, painful tenesmus, the latter being so intolerable that the patient demanded an operation for artificial anus.

April 24, 1877, the operation was performed after the method of Amussat. As the patient had reduced his diet to the sparest possible, using opium freely to relieve his symptoms, the colon was found so collapsed as scarcely to be recognized. It was drawn forward, stitched to the abdominal wound and opened.

The wound healed without reaction; the feces were removed every two or three days with water injections. In the summer the patient went to the country, where he gradually improved in appetite and strength, although the painful tenesmus persisted. He died January, 1878. His condition had been much bettered; until the middle of November, his appetite was good, sleep restored, discharge per anum diminished and painless. The artificial anus remained satisfactory; no reaction. From the middle of November fresh symptoms gradually set in, chills and sweats, weakness, loss of appetite. January 7, 1878, chill of a quarter of an hour's duration, followed by vomiting. He gradually became hemiplegic in right side; death took place January 8.

Autopsy.—Medullary cancer of the upper part of the rectum and of the sigmoid flexure. It should be stated that, as a consequence of the operation, the morbid growth ceased to increase in

volume, which can be readily explained by the affected gut being spared the constant irritation caused by the passage of feces.

Gussenbauer and Martini operated in Hamburg November 9, 1879, for cancer of the sigmoid flexure; the affected parts were removed, and the upper end of the gut sewed to the abdominal wound. Up to date this case has remained without recurrence of the disease.

From these and similar cases in which relief was afforded for periods varying in length from seven months to one year, it is proper to conclude that the operation under consideration is one that the surgeon may have recourse to in cases formerly regarded as hopeless.—*Wiener. Med. Woch.*, Feb. 12, 1881.

APPEARANCE OF THE INTERIOR PORTION OF THE UTERUS AT THE END OF PREGNANCY.

F. MARCHAND.—*Breslauer Aerztl. Zeitschr.*, 1880. No. 22.

A woman, æt. 20, died at the end of pregnancy from hemorrhage consequent upon the bursting of a vein. The uterus was removed from the body unopened, and injected through the arteria spermatica interna; the fetus was then taken out and the uterus suspended in Mueller's fluid.

Examination: The cervix is dilated, funnel-shaped in its upper part, measuring in diameter four centimeters (1½ in.) In the lower part of the posterior wall a great number of large vessels are found upon making a section; there are not so many in the anterior wall. These vessels in the region of the internal os form an extensive plexus; at this place the wall is posteriorly 2.5 centimeters (1 in.) thick, the anterior wall of the cervix above 7 mm. (⅓ in.) and below 6 mm. (¼ in.) thick. The axis of the cervical canal is inclined towards the uterus upwards and forwards. The entire length of the cervix from the anterior lip to the fetal envelopes is 5 centimeters (2 in.); only the lower three and three-fifths centimeters of the cervix forms a canal, and measures in its middle diameter one centimeter; at the external os it is narrower. The upper part of the cervix is funnel-shaped, and is bounded by the line of contact of the membranes with

the uterine wall, which runs posteriorly one and a half centimeters, anteriorly three centimeters, above the upper border of the canular section of cervix, the so-called Ring of Mueller. The dilated blood vessels extend upon the posterior vaginal wall.—*Centrb. Med. Wiss.*, March 5, 1881.

MYCOSIS OF THE TRACHEA.

Dr. Herterich, in the *Aerztl. Intellijenz-blatt*, No. 43, describes a case of parasitic disease of the trachea. Patient aged nineteen, exhibited symptoms of pharyngitis; every eight to ten days he coughed up a grey-colored sputum of firm consistency. No pulmonary disease. The sputum was a clear mucus, containing a solid, irregular mass the size of a bean, one end being rough, the other relatively smooth; it was of a yellowish green color, readily crushed. Upon microscopic examination this peculiar mass proved to consist of fungus elements in a state of active proliferation.

With the laryngoscope it could be seen that the trachea was markedly injected, and at the site of the sixth, seventh and eighth rings on the anterior wall the mucous membrane was swollen, hyperemic and slightly excoriated. There was no mucus nor other coating below the ninth tracheal ring; there was no hyperemia nor exudation at any place. Dr. H. was able to observe the formation of the peculiar masses upon the swollen region. By inhalation of iodine vapor three times daily for fourteen days the normal condition was restored. Carbolic acid inhalations were fruitless.—*Centralblat f. Med. Wiss.*, March 12, 1881.

ACETIC ACID IN TREATMENT OF MAMMARY TUMOR.

Dr. Aubril relates the following case: Last March there came to my consultation the wife of a well-to-do mason, Mme. T., a dressmaker, a very diligent worker, thin, tall, very negligent of the laws of hygiene, aged forty-two years, having a son eighteen years old whom she did not nurse. This lady, menstruating in

small quantity at fixed intervals, of impoverished blood, has been affected for five years with nodulated tumors in the left breast, which, she said, she had not dared to show; when the pain and hypertrophy increasing, she decided to come to see me. From sight and touch and general condition of the patient, I diagnosticated cancerous tumor of the breast non-ulcerated. The patient was unwilling to be operated upon, in spite of the advice of several surgeons of the hospitals whom I advised her to consult. On a formal, peremptory refusal, recalling to mind the observation of Moore at the hospital of Middlesex, 1872, I proposed to the patient to make injections into the tumor of pure acetic acid, one part to two of distilled water. Last March the tumor had a diameter of fifteen centimeters (six inches). I made sixteen injections at seven different times, at intervals of three days, into the upper part of the mass, especially on the outer part, combatting by moist heat the inflammation, which was moderate. Fifteen days later I made a constant application, wadded muslin, soaked three times a day with medicinal prussic acid: a strengthening regime was ordered, rest and medication with iodine. To-day, December 15, 1880, the tumor has almost disappeared, and measures only three centimetres (one $\frac{1}{5}$ in.) in diameter. The affected breast is atrophied and less voluminous than the sound one.—*Jour. de Méd. et de Chirurg. Prat.*, March, 1881.

TREATMENT FOR HEMORRHOIDAL FLUXION.

Dr. MacAuliffe recommends, in the treatment of hemorrhoidal fluxion, the same application which M. Cheron has employed for the relief of congestion of the uterus. The value of the application depends upon the osmotic power of glycerine. It is employed in the form of suppositories, the glycerine being solidified by means of a small quantity of white gelatine. The formula is as follows:

R. Glycerine, - - 3 parts.
Gelatine, - - 1 part.
Ext. belladon. or opium, gr. $\frac{1}{5}$.

The gelatine is melted in the glycerine by the aid of the heat

of a water-bath; the solution is then cooled in cards rolled into the form of a cone. By the cooling it becomes a solid mass, elastic and of sufficient consistence to permit its introduction into the anus. The glycerine should be neutral, and should mark 30° with Baumé's hydrometer.

The suppository should be introduced as deeply as possible. About an hour after its introduction the patient experiences a strong inclination to go to stool. This first stool is always watery; it results from the affinity of glycerine for water. This action is exercised through the mucous membrane, which invests the hemorrhoidal tumors and produces their depletion.—*Jour. de Med. et de Chirurg. Prat.*, November, 1880.

PARALYSIS AFTER FRIGHT.

L. Brieger, in the *Zeitschr. f. Klin. Med.,* II, gives a case of a girl, aged 23, who, after a severe fright, experienced immediately an extreme desire to micturate, inability of the bladder to empty itself, trembling and weakness in the legs, and at the same time abnormal sensation. Upon sitting up in bed dull pains appeared in the lumbar region. Later there set in symptoms of transverse myelitis in the region of the last dorsal and upper lumbar vertebræ—paraplegia, anesthesia, paralysis of the bladder, decubitus, etc. Death ensued as a consequence of the decubitus, meningitis being excited.

At the autopsy a diffuse myelitis was found extending from the first lumbar to the eighth dorsal vertebra; the posterior columns were chiefly involved, and that portion of the anterior surface of the cord that lay next the anterior nerve roots. Above this part of the cord there was a secondary degeneration of the columns of Goll up to the fourth ventricle and down into the middle of the lumbar enlargement.

Brieger's theory is, that the nervous shock caused a contraction of the vessels passing to the lumbar cord, which persisted for some time, and as the cord had been already wearied after a night's dissipation in a ball room, it was thus exposed to destructive changes.—*Centralblatt f. Med. Wiss.*, March 19, 1881.

REPORTS ON PROGRESS.

MEDICINE AND THERAPEUTICS.

Scarlatina from Infected Milk.—At Halifax an epidemic of scarlet fever has been traced to infected milk. Of the eighty-two families supplied by a certain milkman, forty-five were attacked. It was discovered that the milkman had five children ill of the disease at the time.—*Med. Times and Gazette, April*, 30, 1881.

Arsenic in Anemia.—DR. COUPLAND, in his Gulstonian Lectures, gives arsenic the second place in the list of drugs employed in the treatment of anemia, and in some cases, he considers it superior to iron. Oxygen is not a hematinic, but it increases the power of assimilation.—*Med. Times and Gazette, April* 9, 1881.

Belladonna in Pertussis.—DR. JACOBI considers belladonna the most useful drug yet employed in whooping cough. To be of service, however, it must be given in doses sufficient to produce flushing of the cheeks; the quantity being gradually increased, as toleration is established.—*Chicago Med. Jour. and Exam. Mar.*, 1881.

Corrosive Sublimate in Dysentery.—DR. MARCH states that in dysentery (excluding the cases of dysentery of childhood, and those of tropical dysentery) he has never failed to effect a speedy cure by the hourly administration of half a minim of the liquor hydrargyri bichloridi.—(Br. P.) *Med. Times and Gazette, Mar.* 31, 1881.

Bromides in Epilepsy.—DR. A. HUGHES BENNETT, from the consideration of a number of cases of epilepsy treated with bromides, comes to the conclusion that there is a remarkable tolerance of the drug manifested by these patients, and that the fear of any injurious effect is for the most part groundless. —*Edinburgh Med. Jour. Mar.* 1881.

Grindelia Robusta in Asthma.—DR. ROCHESTER reports very satisfactory results from the use of this drug. During the paroxysm half a drachm of the fluid extract is administered every fifteen minutes until relief is obtained. In the intervals fifteen or twenty drops are given every four hours for a period of ten days. Dr. Squibb calls attention to the fact that many of the preparations in the market are not genuine.—*Proceedings of Med. Soc. of Kings Co., May*, 1881.

Soot Inhalations as an Antidote to Phthisis.—DR. HAMILTON suggests that inhalations of pulverized lamp-black be employed in the treatment of phthisis. He has observed the extraordinary immunity from this disease enjoyed by the colliers, cottagers and moulders in the Highlands. By reason of their occupation, or mode of life, they habitually inhale large quantities of carbon, so that their lungs are found to be full of it on post-mortem examination.—*Dublin Jour. of Med. Science, May*, 1881.

Bovine Tuberculosis in Man.—DR. CREIGHTON contends that the milk of tuberculous cows is capable of propagating the disease and moreover, that many cases of supposed typhoid fever, are really acute tuberculosis produced by drinking milk of infected animals. He quotes the case of a school in Bristol, in which four of the boys died of what was diagnosed as typhoid fever, and yet at the autopsy they all were found to present the signs of acute general tuberculosis.—*Review in Jour. Med. Science, May,* 1881.

Peptones in Rectal Alimentation.—DR. A. CATILLON demonstrated by experiments upon himself as well as upon dogs, the great superiority of peptones over non-peptonized albumenoids used as rectal injections. The animals experimented upon lost weight, but were kept alive by injections of raw eggs. When defibrinated blood was substituted, they quickly perished; while they, as well as himself, remained in health, and lost no weight under the use of peptones administered in the same manner.—*Gaz. Hebdom. No.* 42, 1880.

Pernicious Intermittents.—DR. N. S. DAVIS, of Chicago, considers that the effect of the malarial poison is primarily to lower the vitality of all the tissues and morphological ele-

ments of the body, thus putting a stop to the processes of nubaition, secretion etc. He divides the cases of pernicious intermittents into five groups, namely, the comatose, the convulsive, the pulmonary (asphyxic), the choleraic and the algid. In the first four groups we find, post-mortem, congestion and edema of the brain (chiefly the hemispheres), the spinal cord, the lungs, and the mucous membrane of the alimentary canal, respectively; whilst in the fifth there is no characteristic post-mortem appearance. To bring about reaction, the alternate use of cold (affusion or the pack) and warmth is most efficient whilst the use of warmth alone is entirely useless. In the algid cases hypodermic atropia and strychnia should be used in addition; whilst in the choleraic, atropia and morphia are most efficient, with the occasional employment of strychnia whenever the heart's action is feeble.—*Bost. Med. and Surg. Jour. Mar.* 30, 1881. E. W. SAUNDERS.

AT A MEETING OF THE KANSAS CITY MEDICAL COLLEGE ASSOCIATION, held April 26, 1881, the following preamble and resolutions of respect were presented and unanimously passed:

WHEREAS, Dr. W. S. Tremaine, U. S. A., has been forced by official duties to retire from his connection with the Kansas City Medical College, the following resolutions are offered:

Resolved, That the Kansas City Medical College feels much indebted to Dr. W. S. Tremaine for his efficient teaching in his department of surgery, and for his hearty co-operation in all attempts of the college in establishing a higher grade of medical instruction.

Resolved, That Dr. Tremaine's qualities as a medical teacher, as a surgeon and as a man have elicited from the members of the faculty the warmest expressions of respect and regard.

Resolved, That these resolutions be published in the ST. LOUIS COURIER OF MEDICINE, and a copy thereof be forwarded to Dr. Tremaine.

T. J. EATON, M. D.,
Secretary Kansas City Medical College.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, March 17, 1881. Dr. Boisliniere, President, in the Chair.

MEMBRANOUS DYSMENORRHEA.

Dr. Barrett read a report of a case of "membranous dysmenorrhea, with vomiting relieved by intrauterine injection. (Vide p. 505.)

Dr. Prewitt.—Did the patient never conceive?

Dr. Barrett.—I don't know the subsequent history of the patient in that respect. Her general condition is improved. She looks well, and is relieved of the dysmenorrhea and nausea, to a great extent, although she still suffered slightly when I last saw her, some months since. Such cases are not immediately relieved by the operation. They recover gradually, but when the canal is freely opened and kept open, and no inflammatory trouble follows the operation, recovery eventually occurs. At the first period there is considerable pain; at the next period there is less, and as time goes on, the pain gradually decreases. Painful menstruation, long continued, seems to exalt sensation, to render patients nervous, neuralgic, hyperesthetic. It takes time for this condition to wear out.

Dr. Prewitt.—Don't you think there is a tendency for the canal to contract after such an operation, unless it be kept patulous by the use of a sound or bougie occasionally?

Dr. Barrett.—I do; but never resort to the sound, to obviate that danger. A permanent stem retained in position for one week after the operation, is, in my judgment, a safer, more efficient, and more convenient instrument for this purpose than the sound.

Dr. Prewitt.—Wouldn't the introduction of the sound do as well?

Dr. Barrett.—I think not. The canal contracts from day to day, so that the sound easily passed to-day, cannot be passed to-morrow, without using considerable force. To maintain a patulous canal this violence must be inflicted every day for at least ten days. This is the most certain way to excite pelvic inflammation; the greatest misfortune that can befall the patient, a misfortune big with immediate danger, and distressing in its remote consequences. Another advantage of the plug over the sound, is, that its constant presence promotes absorption at the constricted points, diminishes the irritability of the internal os, and overcomes its spasmodic contractility. I have never had any trouble from the continuance of the stem?

Dr. Ford.—Mr. Chairman, I have had lately a case of this character. I made a posterior section and introduced a conical plug one and three-fourths inches long. For a week after the section, I dilated the uterine canal every morning with urethral sounds of caliber from No. 16 to 22 of the French scale, maintaining the patency of the canal by means of plugs impregnated with iodine and glycerine.

We know that conical cervix is sometimes, at least, produced by gradual elongation of the cervix, due to stenotic conditions of the external os, and directly depending upon the contractile efforts of the uterus in endeavoring to expel its usual or unusual contents through too small an orifice. As the canal becomes elongated, the cervix is borne forward into the axis of the vagina, and there is necessarily a concurrent flexion. Of course there is a posterior dilatation, a dilatation occurring backward from the external os, involving the os internum, the uterine cavity, and even the Fallopian tubes. This is a thoroughly familiar condition, and an inevitable result of the stenosis, as much so as the chronic inflammatory excitement of the uterus that is produced by the retention of the discharges. Now we must recollect that after the cavity of the uterus has become elongated and enlarged, it cannot contract upon its temporary contents as perfectly as in the normal state. By the mere fact of retention, therefore, perfect expulsion of blood, or clots is rendered more difficult. I would like to insist upon the relation of these two conditions to each other, maintaining that by the retention of clots or fibrinous concretions, a sort of atonic tolerance is produced in the womb due to prolonged dilatation, as

in the case of the bladder, as well as such a real increase in the size of its cavity, as renders perfect apposition of the uterine walls, very difficult or even impossible. Dr. Barrett's suggestion is a highly useful one, which we should never forget under circumstances like those of the case he has detailed. Washing out the uterus in such cases is distinctly indicated, as the condition of things is wholly analogous to that existing in hematometra or hemato-kolpos, when, after making an opening and evacuating the retained menstrual blood, it is imperative to practice assiduous antiseptic washing.

Dr. Prewitt—This reminds me, Mr. President, of a case I had about three years ago. The patient had suffered for several years, in fact, all her menstrual life, with dysmenorrhea. Menstruation was always exceedingly painful; so much so, that she suffered agony at almost every period. Just about the time of her menstruation she was at a party and danced more or less. I think the flow came on that night. During the evening she was seized with very severe pain, and went home suffering a great deal. The attack was so violent, according to her statement, that pelvic peritonitis must have set up from the outset. I did not see her for some time after the attack, but took charge of the case after she had been in bed four weeks, perhaps. I then found that there was a great deal of fever and exceeding tenderness, so that she was kept in bed two or three weeks longer. After the inflammation had subsided, the uterus was drawn to the right, the result of adhesions. It was evident that the bowel had become more or less involved, as she had great constipation, decidedly collicky pains, etc. The severe attack she had may have been the result, more or less, of hematocele, though I could not tell much about that at the time I saw her. There was then evidence of pelvic peritonitis —very severe pain, great tenderness, fever, etc. After the inflammation had entirely subsided I made a posterior section and passed in a good sized sound, which penetrated the canal pretty well. Of course, I was very cautious in cutting, about setting up any inflammatory trouble again. I tried to be exceedingly careful in dealing with the case. The next period was perfectly easy, and continued so. I continued to introduce the sound for several months, and thus kept the canal patulous. She has had, since that time, generally, pretty easy

menstruation. Now I have not introduced the sound for twelve months; and she occasionally has pretty severe pain at the menstrual period. The tendency of the canal is to contract, and it does contract more or less when not kept patulous by the occasional introduction of the sound. About twelve months ago she had a very severe attack of pain during her menstruation, which I relieved very completely by the use of laudanum injections. This was followed by the introduction of the sound once or twice. After that her periods were perfectly easy again. I think she has complained since of more or less severe pain, and I suppose the canal has contracted somewhat. For that reason I asked Dr. Barrett if it was not likely to contract after this operation, and especially if the incision be not pretty free. In this case I did not make as free an incision as I would have done under different circumstances, for I was apprehensive of inducing a violent inflammation of the pelvis.

Dr. Boisliniere—I will cite a case of the same kind. A lady, forty-five years old, who still continued to menstruate, consulted me for this same condition, described by Dr. Barret, of intense dysmenorrhea at each period, which induced insanity, so that her friends were discussing the advisability of putting her in an asylum. She lived in the country, and during one of these attacks she started with a gun with the avowed purpose of going to her physician's house to shoot him. She once started to come to my office, six or seven miles, without a bonnet on her head, in order for me to remove her uterus. She had excessive pain at every period, and she passed these characteristic moulded membranes with the three openings corresponding to the three openings of the womb, and showed some of the phenomena described by Oldham, and later by Klob. For about four years she continued to pass these membranes once a month. I have at my house quite a collection. She was a very intelligent woman, and brought them to me in bottles dated carefully.

I think that although the uterus may present an os internum sufficient to allow the passage of an ordinary sound, still, the cavity of the womb being much enlarged, this comparative stenosis may cause the dysmenorrhea, so that, as has been remarked, the posterior section is quite justifiable, even in cases where the ordinary sound—the largest Simpson's sound—can

be introduced. Coagulation of blood takes place, and a clot is formed; and the expulsion of it is labor on a small scale. In this case there was no absolute stenosis such as you would find in an anteverted uterus; but I determined to make a posterior section. The uterus was enlarged, and a great deal of blood followed. I like it to bleed freely, and I always allow it to bleed until it stops itself. If the uterus bleeds freely I expect relief for a few months at least. In this case it bled freely, and the woman was relieved for several months. The next menstrual period was followed simply by blood and some thin shreds of membrane; gradually the shreds increased, and finally she was just as bad as she was before. So she continued for three or four years, every month bringing a specimen of membrane which she passed; after this time the membrane gradually disappeared for a whole year. Some time after she became better, she was taken with a violent attack of membranous enteritis, and instead of bringing specimens of uterine mucous membrane, she brought shreds from the bowels, and this seemed to be an alternating condition. As soon as the membranous enteritis ceased, the membranes began to pass from the uterus. The treatment adopted in this case, or at least that which seemed to give the most satisfaction, was scarification of the cervix. After this a very profuse flow of serum would occur from the mucous membrane of the cervix, and the next period would be better; but finally it lost its effect, and the only medicine of efficacy was carbolic acid, and this seemed to give only temporary relief. It is a most ungrateful disease to treat. I believe Dr. Engelmann had some specimens which he was going to examine microscopically, and I would like to hear the result of the examination.

[The remainder of the discussion will be given next month.—ED.]

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, April 24, 1881.

PRESENTATION OF SPECIMENS.

Dr. Carson exhibited a piece of wood which had remained for eight and nine months in the ischio-rectal fold.

Dr. Todd showed a temporal bone taken from a patient with cerebro-spinal meningitis.

Dr. G. A. Moses presented a specimen obtained at the autopsy of a child who was taken sick in the morning after its bath, with evidence of great pain, screaming loudly. The face became very pallid, and soon consciousness was lost. Stimulants were given, and afterwards gum opium, with apparent relief. The infant was seven months old, and had been brought up by hand, but had always been healthy. Late in the day vomiting occurred. Twenty-four hours later the child was still unrelieved, and a diagnosis of intussusception was made. Death occurred after thirty-six hours.

CONJUNCTIVITIS.

Dr. Michel read a paper on conjunctivitis, (vid. p. 498)

Dr. Briggs asked what Dr. Michel used for the purpose of removing secretions in these cases?

Dr. Michel stated that he used an infusion of marsh mallows sometimes, and sometimes simply water, with the addition of three or four pinches of common salt to the pint of water.

Dr. Gregory asked whether Dr. Michel would send his patients out of doors in what is known as "bad weather."

Dr. Michel said if the weather was damp and rainy he would have them stay in, but he avoids having them house themselves closely.

Dr. Gregory said that surgeons do not consider cold to be injurious to a wound or sore, for they frequently make cold applications to them. Cold may, however, occasion a catarrh or, as we call it, "a common cold" in a person who is suffering from a wound or a sore, and the effects of the general disturbance are particularly noticeable in the injured part, and it is expressed by the statement that the person "has caught cold in the wound." Cold exerts an obscure influence, which we cannot fully trace or understand, but it makes a very convenient refuge for the surgeon many a time, when he would otherwise be at a loss to satisfy his patient as to the cause of an unfavorable change in his condition.

Dr. Hardaway said that it seemed to him that the essential point of interest and value of Dr. Michel's paper was the evidence which it gives of the self-limitation of catarrh, and that interfering treatment in these diseases necessarily does harm. He believes that catarrhal diseases *are* self-limiting; that gon-

orrhea itself will run its course to entire recovery without treatment. He thinks that the best treatment of this disease is that recommended by Diday and other French surgeons who advise "to allow the clap to get ripe" before any injections are used in its treatment. In treating diseases of the skin he often sees cases of eczema, which have been made much worse by the application of mercurial or zinc ointment. The proper treatment is to afford them as thorough protection as possible, not even allowing them to be irritated by washing the surface, and a general tonic and supporting medication.

Dr. Gregory asked what was meant by a catarrhal inflammation; if there was a germ that excited this inflammatory condition.

Dr. Michel said that when an inflammatory action has once been instituted it runs its course, whatever be the cause. The degree of the inflammation is dependent upon the power of the irritant, just as the effect of a burn depends upon the different degrees of heat of the body which produces the burn. If the heat be only moderate, the burn is only superficial, involving only the epidermis, while the heat may be such as to lead to the destruction of the deeper tissues as well.

Dr. Gregory said that he should hardly consider the term catarrh as confined to inflammations of mucous membranes. Inflammations might be superficial or interstitial and deep. From his standpoint any superficial inflammation involving epithelial tissue only was a catarrh; and there might be a catarrhal inflammation of a knee joint, in which only the superficial parts of the capsule were affected. In such a case it would be bad practice to lay open the joint to allow the exit of the pus that was formed; but the aspirator might be employed and the pus drawn off by that means, when, if the basis structures were not involved, there would be reason to hope for recovery with a good joint. If the deeper parts were involved, however, it would be necessary to open the joint freely like an abscess. He considers that that the epithelial structures control the changes in the blood-vessels which are tributary to them; that the vessels are affected secondarily. In epitheliomata there is, to be sure, an increased flow of blood to the part affected, but it is secondary to and the result of changes in the epithelium itself.

Dr. Briggs said that he thought the definition of "catarrh" should include the point of "a flow from a surface."

Dr. Michel stated that he held that in every catarrhal inflammation of the conjunctiva the connective tissue layer containing the blood vessels was always involved in the inflammatory process to a greater or less extent. Even in the most trivial superficial inflammation of the conjunctiva he believed that the microscope would demonstrate inflammatory changes in the connective tissue.

Dr. Post inquired what standard of strength Dr. Michel took in speaking of "irritating collyria."

Dr. Michel said that all the astringent collyria now in use are more or less irritating, though by reason of the power of adaptation to circumstances that is possessed by all vital tissues, the irritating effect of an application becomes less and less as the part becomes habituated to it.

Dr. Robinson regarded catarrhal inflammation as an inflammatory affection of the mucous membrane only, attended with a more or less profuse discharge, at first of a mucous character, but which may become purulent. He thought it was certainly an incorrect use of the word to speak of "a catarrh of a joint." As to its self-limiting character, it might be so, perhaps, in an individual who was perfectly healthy in other respects. He would admit *similarity* in pathological processes occurring in the skin and the mucous membrane, but did not think the latter could rightly be designated catarrh.

Dr. Glasgow did not agree with Dr. Robinson's explanation of catarrhal inflammation, but was disposed to accept that of Dr. Gregory. The word catarrh primarily means a flow, and has been applied to a variety of diseases. He recognizes three degrees of inflammation in the bronchial mucous membrane, a superficial and deeper inflammation affecting the mucous membrane itself, and which differ only in the slightly greater amount of swelling that occurs in the deeper inflammation. The third degree involves the sub-mucous tissue, and is characterized by considerable thickening. In the first case no treatment is necessary. However, he is satisfied that it is possible to abort one of these inflammations by the application of powerful astringents in the outset of the attack.

Dr. Todd thought a lesson might be learned by observing the

use of the word catarrh at different periods. He considered the widest application of the word the best. The ancients described catarrh as an affection in which the substance of the brain itself liquefied and filtered down through the cribriform plate of the ethmoid bone. Mucous membrane and skin are similar in structure and in the pathological processes that occur in them. The tendency of modern thought is to simplify nomenclature. The germ theory might be called upon to explain the irritant effect of collyria, as many of the solutions contain germs.

Dr. G. A. Moses said that he thought a catarrhal inflammation was to be understood as an inflammation of any free surface.

Dr. Briggs said that it required a good deal of nerve to treat gonorrheal conjunctivitis on the expectant plan, and that he would have been saved much anxiety in the last few days, if he had known and been able to accept Dr. Michel's theory of treatment. The cases which occasioned doubt as to origin, character and treatment, were as follows: A young man suffering from gonorrhea, who had been duly cautioned as to the danger of contagion and the necessity of cleanliness, suddenly presented an intensely red conjunctiva in both eyes, but with little secretion. Under the use of a mild collyrium of alum and soothing treatment, it began to improve. It did not take on the purulent form that was feared, and on about the fifth day was nearly well. But on about the fourth day, a four-year-old child in the family began to have a profuse purulent conjunctivitis. It was then discovered that another child, who had been suffering, it was said, with sore eyes, had just moved into the neighborhood, and was on such intimate terms as to be another possible source of contagion—which was the true source, was an important point to any one believing that gonorrheal conjunctivitis is peculiarly rapid and destructive, and demands assiduous treatment.

Under the mild treatment mentioned above, the disease of the four-year-old child was not effectively checked, although it did not advance with the severity feared. Therefore, on the fourth day a ten-grain solution of nitrate of silver was applied, and quickly neutralized by salt and water, and directions were given for cleanliness and a collyrium of about a half grain of nitrate of silver to the ounce. The next day the improvement was marked. The strong application was not repeated, and

under the milder treatment the eyes were practically well on the third day. Dr. B. would not have felt justified in treating this second case upon the expectant plan.

Dr. Michel stated a case as illustrating his practice. A child with an excessively profuse discharge from the eyes came under his care. The child was in a bad condition, was jaundiced and anemic. He enjoined the utmost cleanliness, gave tonics and applied astringents externally upon the lids, but made no application to the conjunctiva. The astringent wash was very mild indeed, containing ext. opii aquos. grs. iv.; plumb. acetat. grs. v, in six ounces of water. A compress dipped in this was applied three or four times a day. He considered the pus as protective, and did not seek to remove it from the conjunctival surface, any more than a surgeon would seek to remove all the pus from the surface of a granulating wound. Of course, decomposing pus would be injurious, and what he aims at is to secure a sufficiently constant removal of the pus from the surface, to prevent its being retained and decomposed. Purulent and gonorrheal inflammation are identical in nature; they differ only in degree; and follicular conjunctivitis is simply a complication.

Dr. Carson did not consider Dr. Michel's treatment an expectant one; should consider it rather active than otherwise. He thought the applications that the doctor used were quite efficient remedies.

MISSOURI STATE MEDICAL ASSOCIATION.

The twenty-fourth annual meeting of the Missouri State Medical Association convened in the city of Mexico, May 17th, 1881. Delegates were received at the depot by the very efficient committee of arrangements, and, such as desired, were by them assigned for entertainment to different families who had hospitably thrown open their doors to receive the guests. The sessions of the association were held in the very convenient and commodious opera-house, of which the people of Mexico speak with considerable pride.

The number of physicians in attendance at this meeting was

about one hundred and twenty-five; and the discussions upon several of the papers which were read were quite spirited and interesting.

The association voted that members reading papers be allowed to publish the same in a medical journal of their own choice, provided that they file a copy of said paper with the secretary before the close of the meeting. In order to provide for the publication in medical journals of such papers, the secretary was instructed to supply, at the expense of the association, a copy of his paper to any author desiring it within a week after the close of the meeting.

The first scientific paper presented to the association was that of Dr. F. J. Lutz, of St. Louis, giving a detailed account of a successful case of gastrostomy for cancerous disease of the esophagus. After noting the indications for gastrostomy, he recounted the various steps of the operation in his case, calling attention specially to the administration of bicarbonate of soda immediately before the operation for the purpose of causing its distension with carbonic acid gas, and thus facilitating its recognition through the incision which was made parallel with the eighth rib and just below the border of the ribs. Dr. Lutz displayed photographs illustrating the case.

This paper was listened to attentively, and called forth quite an animated discussion.

On the second day, Dr. Posey, the chairman of the Committee on Medical Education, presented a report, giving a full statement as to the number of students in attendance upon the several regular colleges of the state, and specifying the status of these colleges as to their connection with the Medical College Association, their requirements of candidates for graduation, length of terms, fees for tuition, etc.

With reference to the matter of elevating the standard of medical education, the doctor advocated a preliminary examination to be exacted of every student, unless he furnishes college diploma, or other evidence of suitable attainment.

In the discussion which followed, Dr. Mudd thought the profession at large must assume a greater share of the responsibility of keeping out of the profession incompetent men. No practitioner ought to receive a student into his office who has not a suitable preliminary education to qualify him to appreciate

and make good use of thorough scientific instruction. Dr. Hanna thought the college could not shift that responsibility upon the preceptors, but they must examine and reject those who were not prepared to study intelligently. Dr. Teed, of Kansas City, stated that the medical department of the Kansas City University would be prepared to receive students in the fall, and that that institution would take strong ground in regard to entrance examinations, and also, he thought, in favor of the establishment of a state examining board, independent of the colleges. Dr. Schauffler was strongly opposed to a state examining board. He thought that there were insuperable obstacles to such an arrangement. It would be manipulated by politicians. He thought the great need was for the education of the people to such a degree of intelligence that they would demand the highest qualifications in the practitioners whom they employ.

Dr. Teed introduced a resolution that the secretary be instructed to correspond with the faculties of the various medical colleges, with reference to making their examinations of students a matter of record, and holding these records open to inspection by a board of censors of the state association. This was carried.

The address of President Allen was made the special order for Wednesday evening. He stated to the association the result of the endeavors made last winter to secure proper legislation upon the matter of a state board of health and the regulation of the practice of medicine; and urged renewed efforts in the same direction. He advocated the requirement of a thorough preliminary education of those who study medicine, and the modification of the course of study in medical colleges so that the first, second and third courses shall not be simply duplicates but progressive in their character.

He dwelt specially upon the importance of the county and district medical society organizations as the best means of diffusing and making practical the information contained in the medical journals and new books. He also spoke earnestly with reference to the duty of doctors in the country to write more, to report the results of their experience and observation as to the peculiarities of disease and the therapeutic results attained. We hope the doctor's words will prove to be seed sown in good

soil, and that our friends all through the state, and other states as well, will carefully note and send to us interesting cases and observations which they may have the opportunity of making from time to time.

The paper of Dr. King, of Sedalia, on the Cooling Bath in Fever, was one of interest, and elicited a spirited discussion. We shall have the pleasure of giving it to our readers in full next month, together with some of the other best papers.

Dr. T. J. Norris, chairman of the Committee on Local Medical Organizations, presented a very carefully collated and full statement regarding the various county and district medical societies of the state. As the result of the labors of this committee, a considerable number of local medical societies have been organized, and the interest aroused in the subject is such as will continue and secure the organization of a number of others. The outlook for the profession in this direction is very hopeful.

Dr. B. F. Wilson, of Salisbury, read a paper upon Diphtheria, which called out a good many gentlemen in discussion, some assenting, others denying the identity of diphtheria and croup. Dr. Gerard had found glycerine very valuable in the local treatment of diphtheria. Dr. Schauffler thought favorably of the use of glycerine, but depends chiefly upon stimulants and quinine.

Dr. C. A. Todd read a report of a case in which asthma was dependent upon nasal polypi, and was cured by their removal. In the discussion which followed, Dr. McAlester reported a case in which attacks of asthma are excited by simply touching the external orifice of a urethral fistula.

Dr. G. Hurt, of St. Louis, read a paper upon Hygiene, which was listened to with great interest by the association, and a vote was passed instructing the corresponding secretary to have this paper published, not only in some medical journal, of Dr. Hurt's selection, but also in some daily paper of wide circulation, so that the instructive facts contained in it might be given to the public under the direct sanction of the state association.

The paper of Dr. C. H. Hughes, on Illusions, Hallucinations and Delusions, was a paper of great interest and value; as physicians are frequently called upon to define and interpret these phenomena of disturbed mental action, not only in the course

of practice, but when appealed to in medico-legal cases to decide upon the question of the sanity of a person on trial.

Dr. Lee, of Mexico, read the report of two cases of spontaneous version that had occurred in his practice.

Dr. Warth, of Nevada, read the report of a case of placenta prævia.

Dr. Wm. Dickinson read a paper in his usual polished style, in which he presented the relations of the specialist to the general practitioner.

The officers of the association for the ensuing year are Dr. W. P. King, of Sedalia, President; Drs. A. E. Gore, Paris, B. J. Milam, Macon, G. Hurt, St. Louis, E. A. Waggoner, Carrollton, B. F. Wilson, Salisbury, Vice-Presidents; Drs. C. A. Todd, of St. Louis, and J. H. Duncan, of Columbia, Recording Secretaries; Dr. Wm. Dickinson, of St. Louis, Corresponding Secretary; Dr. C. A. Thompson, of Jefferson City, Treasurer.

The association passed a vote of thanks, for his long and faithful service, to Dr. A. J. Steele, of St. Louis, who had filled the office of secretary for six consecutive years, and who declined to allow his name to be presented for re-election again. Before the close of the last session the following resolution was adopted:

Resolved, That the hearty thanks of the association are hereby tendered to the medical profession and citizens of Mexico for the generous hospitality with which we have been received and entertained in their pleasant city; to the Committee of Arrangements for the careful forethought shown in the preparation for the meeting; to the local press for the extended notices of the meeting; to Hardin College for the invitation to visit their justly famed institution and faculty; to the officers of the W. St L. & P. R. R., and the C. & A. R. R. for liberal terms and courteous treatment.

On Thursday evening a grand banquet was given to the visiting physicians and accompanying ladies by the profession and citizens of Mexico. The tables were bountifully spread with delicious viands; and after full justice had been done to the good cheer so abundantly supplied, there followed a feast of reason and flow of soul which was all the pleasanter from the fac that no artificial stimulus was supplied. The toasts were drunk in clear cold water, and we cannot express too strongly our gratification that the committee of arrangements gave us a banquet without wines and liquors; and surely no one who was

present on that occasion will assert that such stimulants are essential to the success of an entertainment.

In response to the toast "The Bright Side of the Medical Profession," Dr. Heddens alluded to the annual meeting of the state association as one of the bright sides. We were glad to know that the impression made upon us at our first attendance upon such meetings was confirmed by the experience of one who has for years been a regular attendant. We trust that as the years roll by, these meetings will become continually more pleasant and profitable, that all conflicting interests will be harmonized, and that the profession throughout the state will find these gatherings a means of greatly increased usefulness as well as of social enjoyment.

At the close of the banquet two beautiful floral decorations in the form of anchors were presented to the retiring president, Dr. J. M. Allen, and to the incoming president, Dr. W. P. King.

The next meeting of the association is to be held at Hannibal, on the third Tuesday of May, 1882.

SOUTH-EAST MISSOURI MEDICAL ASSOCIATION.

The South-east Missouri Medical Association convened in Charleston, Mo., on May 3d, at 8 o'clock P. M. The president and vice-president being absent, Dr. A. E. Simpson was chosen president pro tem., and Dr. W. P. Howle secretary pro tem.

The association was welcomed by the mayor of the city of Charleston in an eloquent address, which was appropriately responded to by Dr. Harris, of Cape Girardeau.

Dr. Smith, of Belmont, Mo., and Dr. Watson, of Columbus, Ky., were present and were invited to participate in the discussions of the association.

On Wednesday morning Dr. Haw reported a case of meningitis, which terminated in recovery. Dr. Rowe reported a case which terminated fatally. Dr. Waters also reported a case, which was not yet decided, but in which the prognosis was favorable.

A discussion arose with regard to the periodicity of catarrhal fever, in which Drs. Bondurant, Grinstead and Rowe engaged. They believed that quinia sulph. would not control its periodical manifestations.

On Wednesday afternoon, the election of officers being in order, the following gentlemen were declared duly elected:

President, J. W. Cannon, M. D., Jackson, Mo.; Vice-President, R. T. Henderson, M. D., Shawneetown, Mo.; Recording Secretary, G. W. Vinyard, M. D., Longtown, Mo.; Corresponding Secretary, J. S. Sherman, M. D., Charleston, Mo.; Treasurer, J. L. Haw, M. D., Charleston, Mo.

The counsellors for the different counties next reported. It was observed that there had been marked uniformity in the prevailing diseases in the different counties—malarial diseases, pneumonia, catarrh, rötheln, measles and meningitis being the most prevalent, with a few cases of typho-malarial fever. The reports elicited a discussion with regard to the identity of rötheln and measles. Several gentlemen stated that rötheln attacked patients who had previously had measles, as frequently as it did those who had never had either disease. Dr. Cline thought that rötheln and measles were produced by distinct poisons in the blood. He spoke of his experience with cerebro-spinal meningitis, and believed that the majority of severe attacks would result fatally in spite of the most judicious treatment. He thought the disease was produced by a poison in the blood. It was a question what this and many other poisons were—whether matter or force. If these poisons were matter they were tangible, and science ought to discover them, and then we might be able to prevent their effects. Dr. Henderson believed that epidemic cerebro-spinal meningitis depended upon some specific poison in the blood, and that the same was true with regard to pneumonia, it was a "fever." Dr. Haw did not consider the present prevalent meningitis the true epidemic cerebro-spinal meningitis: that the cerebral predominated largely over the spinal involvement. He believed that the disease now prevailing was due to the same poison which produces catarrhal inflammation of the air passages, and not to the specific poison which usually produces true epidemic cerebro-spinal meningitis: that catarrhal inflammation might extend through the Eustachian tube to the membranes of the brain. He used one-eighth grain of morphia sulph. with two to four drops of fluid extract belladonna, hypodermically, with excellent results. It frequently tranquillizes the patient after the first dose. Dr. Cline thought the poison which usually

produced meningitis might produce inflammation of other organs of the body, but that it had special preference for the meninges of the brain and spinal cord, as the poison producing pneumonia had for the lung, or that producing erysipelas had for the skin. Dr. Harris thought that when we went into the discussion of the causes of meningitis we were getting into "deep water," and that we would have to investigate the causes of inflammation; that we have a variety called malarial meningitis; that the poisons alluded to produced their effects by coming in contact with the nerve centers through the circulation of the blood, but that we may have irritants not dependent upon any malarial cause, and cited, in illustration, that shame might produce blushing, the sight of tempting food stimulate the salivary glands, or the sight of a beautiful woman cause priapism; that similar irritants or intangible causes might be sufficient to produce paralysis of the vaso-motor system and inflammation. Dr. Cline believed that it was possible to act upon physically organized matter otherwise than through the circulation, through the senses, for example; but for ought we know, it may be matter acting upon matter after all; that the light which conveyed the impressions from any form of matter to the physical organism was far from being proven not to be matter; that where we now often speak of force, it may be, in truth, force connected with some unseen form of matter.

On Wednesday evening Dr. Sherman read a paper on the subject of Epidemic Catarrh. On motion, the paper was referred to the committee on publication. A very able and interesting address on "The Medical Profession" was delivered by Dr. Haw, to whom a vote of thanks was tendered by the association.

On Thursday morning Dr. Cannon read the report of two cases of occlusion of the vagina, treated and reported by Dr. B. N. Bond and his associates. Dr. Harris thought that the paper only added further testimony on a subject already settled, viz., that it is not necessary to inject the seminal fluid into the vagina to produce impregnation in some instances.

Dr. Britwell spoke on the subject of malaria. He believed that we knew nothing about malaria: that it was an impalpable force; that we knew something about its effects; that it produced periodical diseases; that quinia sulph. was a specific in

its treatment. Dr. Simpson stated that a paper had been read before the Illinois State Medical Society, in which the author endeavored to prove that malaria was produced by extremes of heat and cold. Dr. Harris thought that like causes would produce different phenomena in man, under different circumstances; that the predisposition had much to do with the manifestations of disease; that we were looking too much after specific causes, to the exclusion of a combination of causes that, together with a constitutional predisposition, might cause disease. Dr. Bondurant thought that cholera and yellow fever were produced by malaria; that malaria, in his opinion, was the result of heat, moisture and vegetable decomposition. Dr. Grinstead quoted the diverse opinions of high medical authorities upon the subject, and believed that a great deal of such matter was erroneous.

Dr. Cline reported a case of hematuria, which was discussed by Drs. Harris, Grinstead, Benekemann and others.

Dr. Bondurant read a paper on recent improvements in medical education, which was referred to the committee on publication.

On Thursday afternoon Dr. Grinstead read a paper on "Materia Medica," which was referred to the committee on publication. Dr. Henderson endorsed Dr. Grinstead's paper. He had used some of the new remedies, and found some of them to be good, while others were inert and worthless. Dr. Simpson called attention to some remarks of Prof. Gross, in which he advised the student to study the whole materia medica well, but said that, in practice, about twenty-five or thirty remedies would be about all that he would generally use.

Dr. Cannon read a report of a case of "Bold Hives"—so-called by the old women in attendance—but which proved to be a case of poisoning by datura stramonium, which had been administered to a baby through mistake for catnip. The case was interesting, and the paper an excellent one on stramonium poisoning. On motion, it was referred to the committee on publication.

On motion, Drs. Harris, Simpson, Sherman and Cline were elected as delegates to the Missouri State Medical Society, with the privilege of choosing their own alternates.

On motion of Dr. Harris, the thanks of the association were

tendered to the medical profession and citizens of Charleston for their kind treatment and hospitality, and to the Odd Fellows for the use of their hall.

The motion being adopted, the president declared the association adjourned, to meet again in Cape Girardeau, Mo., on the first Tuesday in November, 1881, at 7 o'clock P. M.

THE AMERICAN MEDICAL ASSOCIATION.

The thirty-second annual session of the American Medical Association was held in Richmond, Va., May 3d, 4th, 5th and 6th. The attendance was good, both as to numbers and the character and standing of the delegates present. The new section on diseases of children was well attended, and its sessions were full of interest. A resolution was introduced providing for a section on dentistry, which, being in the nature of an amendment to the by-laws, lies upon the table until the next meeting.

President Jno. T. Hodgen, of St. Louis, delivered his address at noon of the opening day, directing attention to advances made of late years in surgery, both in extending its field and perfecting its methods. He deprecated the reckless enthusiasm which leads a surgeon to seek, above everything else, the opportunity to perform difficult and dangerous though brilliant operations; while at the same time he called attention to a number of situations and conditions which render important or imperative prompt, early and unhesitating use of the knife. He noted, also, some of the causes which interfere with success, both in operations and the treatment of diseases and injuries.

Dr. Joseph H. Warren, of Boston, in his report as Chairman of the Committee of Foreign Delegates, urged upon the association most earnestly the adoption of a plan of publication of its transactions similar to that adopted by the British Medical Association, viz., by the establishment of a weekly medical journal, the editors and officers of which should be under appointment from and responsible to the association. A committee had been appointed the previous year to consider this same matter and report. This committee, through its chair-

man, Dr. Packard, made a report the following day; and concluded their report by recommending that a committee of five be appointed to digest and report in detail, as early as possible, a plan for the publication of a weekly journal by the association, to nominate an editor, fix his salary, and determine time and place of publication of the journal. The recommendation, put in the form of a resolution, was amended by striking out the clause with reference to nomination of the editor, and by increasing the committee to seven, including the secretary and treasurer of the association, was then adopted.

One of the most interesting papers presented before the association was that by Dr. Hunter McGuire, of Richmond, Chairman of the Section on Surgery. The title of the paper was, "Operative Interference in Gunshot Wounds of the Peritoneum." Dr. McGuire has had unusual opportunities for the study of such injuries, both in military and civil practice, and his opinion will have great weight with the profession. He opposes the expectant treatment and advocates operative interference in gunshot penetrating wounds of the peritoneum, whether attended with visceral lesion or not. He either enlarges the wound in the abdominal wall or makes an incision in the linea alba of sufficient extent to allow a thorough inspection of the injured parts. Hemorrhage should be arrested. Intestinal wounds should be closed with cat-gut or other animal ligatures after trimming their edges, if lacerated and ragged. All foreign material and blood should be carefully removed and provision made for drainage, either by maintaining the patency of the wound of entrance when that is dependent, or by making a dependent counter opening.

The Committee on Clinical Observations and Records, Dr. W. S. Davis, Chairman, concluded with a recommendation of the appointment of a "Standing Committee on Atmospheric Conditions and their Relations to the Prevalence of Disease," who should select not less than six nor more than twelve places that will best indicate the atmospheric conditions in the most important climatic sanitary districts of the United States, "and establish therein means for continuous observation and record of appreciable conditions of the atmosphere, according to the most approved methods, and of the observation and prevalence of all acute diseases;" full reports of observations taken at

each station to be made January 1st and July 1st of each year. The appropriation of $500.00 to carry out these recommendations was also advised. The recommendations of the committee were adopted by the association, and the following committee was appointed: Drs. N. S. Davis, Chicago; J. M. Toner, Washington, D. C.; H. O. Marcy, Boston; W. H. Giddings, Aiken, S. C.; S. M. Bemiss, New Orleans.

After considerable discussion of the proposed amendment to the code of ethics, the following substitute, offered by Dr. J. S. Billings, was adopted:

"It is not in accord with the interest of the public, or the honor of the profession, that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with the graduation of, persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine."

In the section on practice of medicine the following resolution, offered by Dr. Dunster, was adopted:

"*Resolved,* That the spirit of the code of ethics forbids a physician from prescribing a remedy controlled by a patent, copyright or trade-mark. This, however, shall except a patent upon a process of manufacture or machinery, provided patent be not used to prevent legitimate competition; and shall also except use of a trade-mark used to designate a brand of manufacture; provided, that the article so marked be accompanied by working formulæ, duly sworn to, and also by a technical scientific name under which any one can compete in the manufacture of the same."

The officers of the association for the ensuing year are: Dr. J. J. Woodward, U. S. A., Washington, D. C., President; Drs. P. O. Hooper, Arkansas, Leartus Conner, Michigan, Eugene Grissom, North Carolina, and Hunter McGuire, Virginia, Vice-Presidents; Dr. Wm. B. Atkinson, Pennsylvania, Secretary; Dr. R. J. Dunglison, Pennsylvania, Treasurer; Dr. Wm. Lee, Washington, Librarian.

The meeting next year will be held at St. Paul, Minn.

An amendment to the by-laws was adopted to the effect that hereafter, in the election of officers and appointment of committees, except the committees of arrangements, climatology and credentials, only delegates present at the meeting shall be eligible.

On the evening of the first day of the session Drs. McCaw and McGuire, of Richmond, gave a reception in the parlors of the Westmoreland Club to the members of the medical association and ladies accompanying them. It was an occasion that was greatly enjoyed by all who were present.

A grand reception in the theatre was given to the association by the medical profession and citizens of Richmond, and was pronounced the most brilliant and fashionable gathering ever held there. The decorations were most elaborate and tasty, and included, besides the national flag, those of every state in the Union. Rare and fragrant flowers filled the air with delicious odors, while their bright colors and graceful forms met the eye on every hand. Music added its charm to the occasion, and nothing was lacking to make it an event that will linger long in the memory of those who had the privilege of attending the reception. In this, as in all other respects, the hospitality for which the people of the South have always been distinguished was extended with a lavish hand to the members of the association.

Our space will not allow of going into detail as to the work done in the sections. We can only say that many valuable papers were read and discussed, most of which will, doubtless, be given to the profession through the pages of the leading medical journals of the country some months before the volume of the Transactions appears.

The Virginia Medical Monthly and the *Southern Clinic* each published a daily edition during the sessions of the association, the former of which gave an excellent detailed account of each day's proceedings, with an abstract of the papers, making a valuable report that will be of interest not only to those who were in attendance upon the meeting, but also to many others who were unable to be there.

THE *Mississippi Valley Medical Monthly*, with Dr. Julius Wise in the editor's chair, is with pleasure placed upon our exchange list. It is a forty-eight page journal, with a subscription price of one dollar per annum. We wish it may meet with abundant success.

COMMUNICATION.

ST. LOUIS, May, 1881.

EDITOR COURIER OF MEDICINE:—

There is no article about which so much has been written, and from which such varying results have been obtained, as pepsin. My experiments upon the pepsins in the market may bring out a few ideas not generally acted upon.

The experiments were conducted with French pepsin, "Pure pepsin," "Jensen's crystal pepsin" and "saccharated pepsin." All were tried upon 300 grains of hard boiled whites of eggs, in four fluid ounces of water acidulated with five drops of chemically pure muriatic acid to the fluid ounce; all were kept at a temperature between 90° and 105° F, and occasionally agitated in a bottle.

RESULTS.

French pepsin, 1, 5, 10, and 15 grains were used to 300 grains of hard boiled whites of eggs.

"Pure pepsin," 1 grain used to 300 grains of hard boiled whites of eggs.

"Jensen's crystal pepsin" 1 grain used to 300 grains of hard boiled whites of eggs.

"Saccharated pepsin," 10 grains used to 300 grains of hard boiled whites of eggs.

In two hours the albumen under the Jensen's pepsin was more than half dissolved; under the "saccharated" not one-fourth; about the same with "pure pepsin," and with the French, about the same as with the last two, very little difference being noted in the various quantities used.

In three hours, three-quarters under Jensen's was dissolved; and very little change noticed with the others.

In four hours, four-fifths under Jensen's was dissolved, and not more than one-half under the others.

In six hours no appreciable diminution could be noticed under the "pure pepsin," "saccharated" or "French," while under Jensen's only about 10 grains out of the 300 was left. Longer

experiments were barren of different results. The same pepsins were tried with milk—2 grains each, of "pure pepsin," French, Jensen's and 10 grains "saccharated" to a glass of fresh milk; they all curdled it within two minutes, the French and Jensen's almost immediately.

100 grains of raw beef with two grains each of Jensen's, Boudault's (French) and "pure pepsin," and 10 grains of "saccharated," was, in three hours, under Jensen's, about two-thirds reduced to fine particles, under the French one-half, and under the "pure" and "saccharated," not more than one-fourth. Four hours made very little change in any. In the experiments, both with milk and beef, the waters was acidulated with chem. pure muriatic acid, ten drops to the fluid ounce, and kept by means of water and sand bath between 90° and 110° F. The conditions in the experiments were the same with all the pepsins.

Now as to the manufacture of pepsin, authorities state that pepsin is impaired by *chloride* of *sodium*, except in *small quantities*; and yet the process of one of the principal manufacturers is, not only to precipitate, but re-precipitate it with this agent. Let me quote Dr. Carl Jensen in this matter. He says: "Some of the pepsin preparations are figuring under such names as *precipitated* and *re-precipitated* pepsin, etc., which process is entirely impracticable, as pepsin, in its nature, is unlike pharmaceutical preparations in general, because this agent owes its medicinal property to its being vitalized and capable of propagation; hence, my construction of an apparatus, which I call the germinator, in which the peptic principle multiplies itself until the elements in its mucous vehicle, destined for its augmentation are exhausted." It is evident that pepsin is analogous to the other principles of ferments and other decomposing bodies of microscopic minuteness. "The profession can, therefore, understand how easily the vitality of this most delicate therapeutic agent is destroyed, particularly with such strong drugs as cause it to separate and precipitate."

Now as to the different preparations of pepsin, authorities all agree that alcohol impairs the virtues of pepsin; and yet there is no more popular way of prescribing it than as, "wine of pepsin," except it may be, the "elixir peps. bism. and strych.," which, while it has the same objection as the

"wine," has another very serious one, so far as the pepsin is concerned, and almost leads the writer to assert that all the benefits gained by the elixir peps. bism. and strych. are due to the bismuth and strychnia, and not to the pepsin. For why? Bismuth is insoluble in *acid* solutions, and pepsin is not only insoluble in *alkaline* solutions, but is destroyed by them. In making the elix. peps. bism. and strych. alkalies are added, to dissolve the bismuth, and at the expense of the pepsin. Why not then use either the elix. bism. and strychnia, pepsin and strychnia, or maybe, the granular eff. peps. bism. and strych? though this has the objection of being expensive to the patient though not more so than the present elixir of that composition.

W. B. Addington, Ph. G.

700 *Olive Street, St. Louis.*

St. Louis, May 12, 1881.

Dr. E. M. Nelson, Editor St. Louis Courier of Medicine.

Dear Sir: — I hereby certify that the above tests were conducted by Mr. Addington in a strictly scientific manner; and as they were performed in my presence, I can also state that the results mentioned in the paper are in exact accord with his experiments. Respectfully, etc.,

Justin Steer, M. D.

802 *Washington Avenue.*

Ox Aorta Ligature.—Richard Barwell read a paper before the Royal Medical and Chirurgical Society two years ago which presented the advisability of leaving intact all the coats of an artery ligated in continuity, and introduced a flat ligature for this purpose, made by cutting narrow strips from the aorta of an ox. Further experimentation has convinced him of the value of this material, as being absorbed with sufficient slowness to make it trustworthy as a ligature for arteries in their continuity. The ligatures are cut from a perfectly fresh aorta and dried. He considers that a lack of uniformity of action of cat-gut ligatures and sutures is dependent upon the fact that the sheep's intestine, from which the material is made, has undergone some degree of decomposition in order to make possible the separation of the submucous and mucous tissues.—*Brit. Med. Jour.*, March 19, 1881.

NOTES AND ITEMS.

THE MEDICAL COLLEGE ASSOCIATION held their annual meeting at Richmond, May 5th. Little business was transacted. The officers for the next year are: Dr. Bodine, of Louisville, President; Dr. W. T. Briggs, of Nashville, Vice-President, and Dr. Leartus Conner, of Detroit, Secretary and Treasurer.

THE AMERICAN SURGICAL ASSOCIATION held their meeting Thursday afternoon, May 5th, with Dr. S. D. Gross, of Philadelphia, presiding, and Dr. J. R. Weist, of Indiana, at the secretary's table.

The new constitution and by-laws which were adopted allow the admission to the association of surgeons known as "specialists," who were excluded under the provisions of the old constitution. It was provided, by an amendment to the constitution, that all nominations for membership shall lie over until the next annual session.

The officers of the Association are: Dr. S. D. Gross, President; Drs. S. A. Dugas, James R. Wood, Vice-Presidents; Dr. J. R. Weist, Recording Secretary; Dr. W. T. Briggs, Corresponding Secretary; Dr. John H. Packard, Treasurer.

The next annual meeting will be held at the Oriental Hotel, Coney Island, N. Y., September 13th, 14th and 15th.

THE ASSOCIATION OF MEDICAL EDITORS held their annual meeting on Monday evening, before the American Medical Association convened. The President, Dr. J. F. Shrady, and the Vice-President, Dr. E. M. Nelson, being absent, Dr. Octerlony was called to the chair. Dr. Shrady's address, which he had sent to the association, was read by Dr. Carpenter, and was ordered to be printed.

Drs. Frank Davis, of Chicago, and C. W. Cowling, of Louisville, both being active members of the Association, have died during the past year.

The Committee on Necrology asked further time for the preparation of memoirs of these deceased members, which was granted.

The following officers were elected for the current year: Dr. Landon B Edwards, *Virginia Medical Monthly*, President; Dr. Ralph Walsh, *Walsh's Retrospect*, Vice-President; Dr. D. S. Reynolds, *Louisville Medical Herald*, Secretary.

Drs. N. S. Davis and S. D. Gross were appointed a committee to conduct Dr. Edwards to the chair; and in his address of thanks to the association he remarked that he was quite at a loss to decide which were the greater honor—to be elected to the office of president or to be inducted into office by two such men as these Nestors of the profession.

Dr. Davis gave a stirring address as to the purposes and aims of the association, which, it seemed to him, had never been accomplished.

Discussion followed on matters of interest in medical journalism; and, after a free interchange of views, the association adjourned, to meet next year at St. Paul, on the Monday evening preceding the meeting of the American Medical Association.

ALUMNI PRIZE.—The Prize of the Alumni Association of the College of Physicians and Surgeons, New York, of $500, for an original essay on some subject connected with Medicine or Surgery, is open only to the competition of the Alumni of the College of Physicians and Surgeons.

The conditions upon which the prize will be awarded are as follows:

1. The subject is left to the option of the competitor.
2. The essay must present sufficient original, experimental or clinical observation to make it a useful contribution to medical knowledge.
3. The essay designated by a motto, must be sent to a member of the Committee on Prize Essays, accompanied by a sealed envelope, inscribed with the same motto, and containing the name and address of the author, on or before April 1st, 1882.

ALBERT H. BUCK, M. D., 109 Madison Ave.,
CHARLES MCBURNEY, M. D., 40 West 36th St., } *Committee.*
GEORGE L. PEABODY, M. D., 57 West 38th St.

OBITUARY.

DR. MOSES J. DE ROSSET.—The death of this distinguished and learned physician occurred at Wilmington, North Carolina, on Sunday morning, May 1st. The deceased was one of the proprietors and founders of the *North Carolina Medical Journal*, a periodical which deservedly ranks high with the profession. Long continued ill-health, from chronic Bright's disease of the kidneys, contributed to mar the usefulness, and cut short the career of Dr. de Rosset, who was by education and natural talent one of the most accomplished physicians in the country. Receiving his academic education in France and Switzerland, he had opportunities to become thoroughly conversant with the French, German, Italian and Spanish languages, which, together with a finished classical education, prepared him to enter the medical profession with a ripeness of intellect and literary advantages possessed by few. After graduating at the University of New York City, when that venerable institution was in the zenith of its glory and graced by such names as Valentine Mott, Martyn Paine, John W. Draper, Bedford, etc., he entered Bellevue Hospital after a searching competitive examination and served through that institution with distinguished ability.

On the outbreak of the war he cast his lot with the Southern Confederacy, and as surgeon in its army, soon gained high rank through his ready skill as an operator. In the handling of instruments, and the application of dressings, Dr. de Rosset really deserved the title of *expert*. In recognition of this fact, he was for several years during the war surgeon in charge of the *fracture ward* of the "Officers' Hospital," at Richmond, Va. The deceased was a graceful writer and talker, and has left behind some substantial monuments of his literary ability. For several years he was the translator of the American edition of *Bouchardat's Annual*. In the death of Dr. de Rosset, the American profession has met with a loss not easily filled, while his native State of North Carolina, mourns a citizen of rare culture and of the highest social and moral worth. W. C.